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# TEXILE BULLETIN



VOL. 44

MARCH 23, 1933

No. 4

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Technical Articles In This Issue Featuring Dyeing, Bleaching, Finishing

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## Cotton Textiles

**C**ENTRALIZATION of export efforts has been suggested as the first approach to a solution of some of the merchandising problems facing the cotton textile industry. Success in this endeavor would undoubtedly have a stimulating effect on the domestic market and ameliorate some of the conditions that have long had a retarding influence, according to The Index, published by New York Trust Company.

The cotton textile industry in the United States employs more workers than any other manufacturing group. Every individual and almost every industry in the country uses, in some form or another, the products of the cotton mills. The domestic industry consumes enormous quantities of raw cotton, yet raw cotton, itself, is the item of greatest value in American export trade, and more than half of each year's cotton crop is normally exported.

The early history of the American colonists indicates that they paid little attention to the economic possibilities of growing raw cotton or of manufacturing it into cloth. The home government in London, although interested in developing raw materials in the colonies, also paid little attention to these possibilities because it apparently was dominated, insofar as the textile industry was concerned, by the silk and woolen manufacturing interests. Indeed, an attempt was made to develop the culture of silkworms in Virginia by offering a bounty of tobacco for silk, and a small amount of silk was produced as a result of this.

Such discrimination, however, did not deter British inventive genius, and, as described in the Index for July, 1932, the eighteenth century was notable for the development and coordination of spinning and weaving machinery. During this period, the discriminatory laws against cotton were repealed.

### AMERICAN PROGRESS

In 1790, Samuel Slater set up the first American textile mill in Pawtucket, Rhode Island. Soon after his arrival from England, where he had been a mill hand, he constructed his machinery entirely from memory on the Arkwright principle, although a few parts were received concealed in cargoes of salt. Part of his original equipment is now in the National Museum in Washington. In 1793, the same year in which Eli Whitney invented the cotton gin, Slater built a new mill with seventy-two spindles. This may be regarded as the first complete English-type cotton spinning mill in the United States. Two factors influenced the subsequent rapid expansion of the American industry. One of these was the increase in domestic demand; the other a decrease in imports caused by armed conflicts in Europe and by the War of 1812 between the United States and England.

By 1815, there were 170 mills in this country with a total of 134,214 spindles, all concentrated in New England States. Development of mills in the South was slow

and costly and, as shown in the following table, did not assume importance until the present century:

	1890	Bales	1922	Bales	1932	Bales
	Spindles	Consumed	Spindles	Consumed	Spindles	Consumed
New England	10,934,297	1,502,177	17,938,805	1,853,153	11,873,558	921,000
South	1,570,288	538,895	15,906,165	3,977,847	19,083,062	4,343,000

Active spindles cover maximum number of spindles operated for any period regardless of duration.

Generally speaking, cotton mills may be divided into four classes: (1) spinning mills, which supply yarns for units outside the cotton textile industry proper and to (2) weaving mills purchasing their yarn from independent spinning mills; (3) grey goods mills, representing more than half the total output and supplying unfinished cloth; (4) mills undertaking all the operations (spinning, weaving and finishing) in the manufacture of the completed product.

The Southern mills, located near sources of supply, are peculiarly fitted to specialize in the coarser types of yarns and fabrics, requiring larger amounts of raw cotton.

Among a number of reasons for the establishment of cotton mills in the South, at the expense of the industry's growth in New England, might be cited relatively lower labor costs, lower taxes, at the outset, and proximity to raw material supply. Moreover, many southern mills, to derive full benefit from the fixed investment, have customarily operated two shifts, while, in New England, only one shift has been generally employed.

### OVERPRODUCTION

The use of the night shift tremendously increased the capacity of the southern mills to the point where, as discussed in The Index for June, 1930, the industry had already been faced with the problem of overproduction sometime before the depression became general. In recent years, the night work problem has been aggravated by a growing tendency among some of the New England mills to follow this example.

One of the major objectives of The Cotton-Textile Institute involves the stabilization of production and employment through greater uniformity in running time. As a result of its efforts, during the past two years approximately 80 per cent of the spindles in the industry observed a voluntary schedule of not exceeding 55 hours for daytime shifts and 50 hours for night shifts, where the night run is employed.

Data covering 712 mills comprising 16,150,000 spindles, representing the bulk of southern capacity, according to Mr. George A. Sloan, President of the Institute, revealed that 89 per cent of these mills, in 1932, were observing the desired maximum and that only 8 per cent were on a standard 60 hour schedule. Furthermore, night shifts were being operated normally by only 43 per cent of the mills. Of these night running mills, 49 per cent observed

(Continued on Page 24)

# The Colorist and Co-Operation \*

BY ARTHUR E. HIRST

Technical Adviser, Carbic Color & Chemical Co., Inc.

THE man who starts in as chemist of a print works most certainly must take the right attitude from the first. If he gives the impression that he knows it all he must change his attitude, for his education must be completed by overseers. All the books in the world will not teach him the inside workings of a print works and if he doesn't make a good impression on you men he may as well give up. From the time I worked as head chemist in a one-man laboratory, I found that the foremen were willing and eager to help a greenhorn if he discarded any preconceived notion that he knew what it was all about. A chemist's fund of common sense is usually developed by contact with you men. A man can gain common sense and experience if he and you are willing that he should take off his collar and coat and pitch in. This applies not only to color shops but to other departments. I always have regretted not having dug in myself, but my boss decided otherwise by having me tramp around the whole plant. Sometimes a feeling persists in the minds of the plant men that the chemist is trying to get their jobs, but I know that is not so, and any good results from their co-operation is going to rebound to the credit of the overseer more than to anyone else.

## THE LABORATORY

Let us look at some of the advantages of a laboratory. First is the testing of colors for strength and suitability, yet the new chemist cannot even do this properly without your help in directing the practical mixing. Of course, the reputable concerns before the war and now seldom put out colors deficient in strength, but in case of new colors or samples the laboratory can relieve the color shop of detail and loss of time by small trials. Detection of defects in chemicals before sending to the plant also helps to save time and money immeasurably. Perhaps the best example of this was during the war when the chemical organizations of the print works were invaluable in substituting for unobtainable colors and processes which kept the plants running and saved our jobs.

Aside from routine testing, the chemist can have a hand in the solution of plant problems. Here his chemical knowledge may stand you in good stead. As, for instance, a case in which we were printing Para Red for flags, the color decomposed rapidly and tests for neutralization showed that the color had been made up properly. The chemist's knowledge of his science led to the discovery that the color was being decomposed by electrolysis caused by electrical leakage. Simple grounding cleared up the trouble.

## NEW PROCESSES

Then we have investigation of new processes which would be time-consuming and expensive on the practical scale. In most cases the laboratory can at least determine the fundamental conditions to work under. You may say that the dyestuff manufacturers should do this, but they are not in possession of facilities for putting in practical trials and have not available ready expect advice such as you men can furnish. Since being connected with a dyestuffs concern myself, I find a pleasant readiness on the part of most colorists to co-operate in every

way with the testing of something which shows promise of value to them. As far as laboratory work goes, I have usually found it necessary to go through formulae published by foreign color companies to eliminate unnecessary ingredients. In 1914 the representatives of a German dyestuff house instituted experiments to dye Fast Blue B base practically. His formula called for the addition of acetate of alumina to slow down the coupling with the prepare. As a matter of fact we found that reaction was even very slow without the addition of alumina. Moreover, the foreign companies do not always adapt their methods to United States conditions, though they are very thorough in their experimental work.

Even in investigations of other processes outside the color shop the co-operation of the colorist is invaluable. Take agers, for instance, the bug-bear of us all. Much work still remains to be done on the study of ageing conditions.

Not only can you help the chemist, but he can help you, for example in the testing of your prints to determine their suitability for the trade. You know that some customers have the cute habit of testing fastness with such materials as ink eradicator and the laboratory can usually detect the use of such materials so that you need not worry so much. Even the laboratories of such concerns as the large consumers are not always fair in their tests.

Generally, you can use the chemist to help diminish troubles in your plant, even though trouble will always be lurking in the corner.

Research for the good of the printing industry as a whole should be and will be put on a higher plane. We may compare this with the research organizations of the iron and steel industry, the oil industry and others. In this connection it may be interesting to note the comments made recently by a steel man that they were running at 18 per cent capacity and so losing money, whereas if they could run at 30 per cent capacity they would be at least breaking even. Compare this with the finishing industry which was recently running at 105 per cent capacity and still losing large amounts of money. No doubt much of this advantage is due to research in the steel industry to simplify practice. The American viewpoint of research is not as favorable as that of the foreigners who consider that even if only a few valuable facts are discovered, time and money is not wasted.

Co-operation in experimental work is not confined only to the colorists. Consider, for instance, the few improvements made in printing machines and engraving processes. The printing machines are very much the same as they were a hundred years ago, and it is many years since radical changes have been made in engraving. Recently a new adjustable gear has been developed for printing machines and is being used successfully in some plants. In the engraving line there is a new process which is promising and, if any of you gentlemen are interested in a brief outline, I shall be very glad to give it to you.

## A FEW IMPROVEMENTS

A few improvements in various processes are as follows: In singeing, new burners. Washers have been developed with anti-friction bearings and individually mo-

(Continued on Page 6)

\*Paper presented before the National Association of Print Works Colorists, held in Providence, R. I.



Taking a step is perhaps the most routine thing we do. Yet it is interesting to see how many different industrial sources are called into action by this simple move. In the shoe—leather, textiles, metals, dyes, rubber; underfoot—flooring or paving, rug or linoleum, wood or cement or stone or any of a hundred possible materials. Notice these things next time you walk; and let us remind you that in practically *every* industry you can note, the products of the American Cyanamid & Chemical Corporation have a definite part.



Acids	Starches
Alkalies	Gums
Bichromates	Oils
Alums	Softeners and
Potashes	Finishes
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535 FIFTH AVENUE . NEW YORK

## The Colorist and Co-Operation

(Continued from Page 4)

tor-driven nips and agers with outboard bearings. In the bleach house we have all-rubber rolls, kier pilers, and souring with sulphur dioxide. Recent developments in drying have been cans made from seamless tubing with modern siphon arrangements. Motor-driven jigs have proven valuable for dyeing fine goods and, in the finishing process, we have tenters with roller bearings and new swinging regulators, hydraulic calenders with worm drives, and pre-shrinking methods—such as sanforizing.

Such improvements would be of little value unless tested practically by overseers in the plant. Therefore there is no doubt that your co-operation is invaluable especially when the use of practical machines is necessary.

### THE COST DEPARTMENT

Perhaps an indispensable type of co-operation from the colorist is with the cost department. This helps to prevent the quotation of wrong prices and so to diminish losses. In some plants lack of knowledge of true costs is a weakness. It is not necessary to expand on the dangerous phase of this. The colorist's knowledge of his own costs and of other processes helps the company by giving him an incentive to change color shop methods to lower the costs of other processes in the plant. This may be applied to the possibility of shorter ageing, better color value, simpler after-treatments and savings in the finishing department. As, for example, the selection of proper thickeners to allow the use of less softening material to produce soft finishes. At times the savings per yard may appear negligible but if you can save 1/10 cent per yard on a weekly production of half a million yards, you are saving \$500 a week or \$26,000 per year.

### DAILY TROUBLES

The uncertainty of the present day is perhaps due as largely as anything else to the fact that the owner or manager is at the mercy of unscrupulous customers who claim that they can get goods cheaper than quoted by changing to some other plants. It is impossible to confirm such a statement immediately at the time when a quotation must be made. It is often stated, and there may be some truth in it, that there are a great many more printing machines than are necessary to supply the demand, yet at times practically all the plants are busy day and night. It is natural for a company receiving a large amount of orders requiring immediate delivery to run the machines at top speed in order not to lose the business to someone else; thus, instead of creating a scarcity of goods with a consequent possibility of raising prices, the demand at the low prices is easily filled and so the printers are no better off than ever and the goods are practically given away. Of course, this is another argument for keeping down costs to meet the selling prices if possible and, where it is not possible to break even on staple lines, the only possibility is to produce novel or unusual effects so that higher charges may be made for the goods—all of this requiring even greater industry and ingenuity on the part of the individual colorist.

I am mentioning all this to emphasize the need of co-operation between the salesmen of your goods and yourselves. The effect of such co-operation may have a lasting effect in educating the salesmen to the natural limits of printing, and we hope that any ideas gained by them may persist during the better times to come.

### INDIGESOLS

I have spoken earlier of the necessity for instituting new developments for the purpose of saving money for a concern. This naturally brings me to a few words with reference to one of the most important recent developments in dyestuffs. That in which I am naturally most interested is the subject of Indigosols. A great many of you are thoroughly familiar with these colors since they are being used in large quantities. The use of these colors affords an example of cost cutting without sacrificing quality, the amount of money saved by many plants using these dyestuffs being very considerable, amounting in some cases to 30 to 50 per cent of the color cost. Some plants have been rather backward about taking up their use but they will consider it seriously if they keep in mind the fact that very large yardages are being printed with Indigosols and giving perfect satisfaction.

For the sake of some of you who are not particularly well acquainted with the colors, I will take a few minutes in closing in describing them.

The methods of application are very simple and effective and produce in a great many cases results superior to the ordinary vat colors. Any characteristic difficulties are slight and do not present obstacles which need worry any able color shop man.

As received in the color shop Indigosols are sulphuric acid esters of leuco or reduced vat colors. After they have been printed and developed they have reverted back to the exact form of ordinary vats so that there need be no doubts as to their fastness to any influence which the corresponding vat colors will stand. In plain English we might call them "water-soluble vat colors."

In most cases they are dry powders which are completely dissolved in such solvents as urea and cellosolve. The most essential requirement in the color shop is that complete solution be assured. As a rule all that is left is to thicken the color with the addition of neutral chromate of soda.

### ONE ADVANTAGE

An outstanding advantage of Indigosols, at least from the standpoint of low cost of printed shades, is their adaptability to mixing with Pharmol Blue or Yellow or any of the Rapidogens or Rapid Fast Colors. Thus a range of shades strictly comparable with those produced by ordinary vat colors may be obtained. The Rapidogens, of course, are stable mixtures of the Fast Color salts and naphthol bases.

After printing, if the Indigosols are mixed with Rapidogens, the goods are aged at about 210 deg. F. or over in the presence of steam and acetic acid fumes. In the ageing an outstanding advantage of these colors is the fact that no care is required to keep the box free from air; it is simply necessary to prevent the decomposition of the Rapidogens by being sure that the colors entering the ager immediately are exposed to acetic acid fumes and not too high temperatures lacking in acid. A number of simple methods for putting the acid into the box are used. For instance, running it in through a pipe onto a hot plate in a regular hydrosulphite ager; blowing it in with the steam supply; or providing the box with a small tank of acetic acid in which some steam coils are placed. Several plants are installing special agers in the form of a wooden box which is durable and cheap.

After ageing—or even before—the goods can be allowed to lie indefinitely before development provided they are protected from the action of light. After ageing, the goods are developed in the open with an acid oxidizing

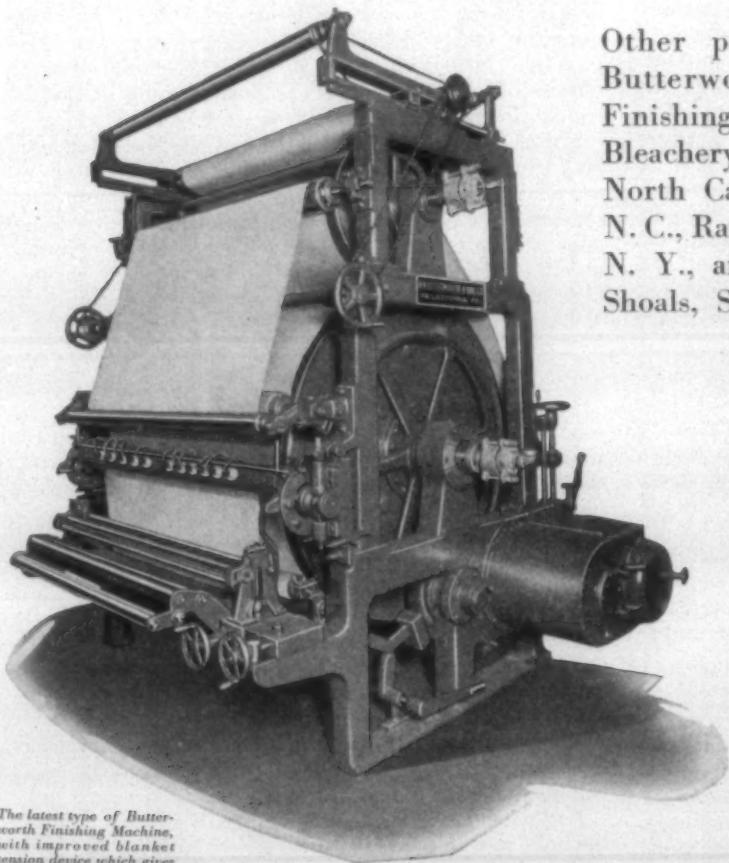
(Continued on Page 18)

# What about you?

*Concerns that have installed Butterworth Sanforizing equipment are busy.*

The Erwin Cotton Mills, West Durham, N. C., have just put in a fourth Butterworth Sanforizer.

The Union Bleachery, Greenville, S. C., has installed three Butterworth Sanforizers; Pepperell Mfg. Co. has installed one each at Lewiston, Maine, and Lindale, Ga.



*The latest type of Butterworth Finishing Machine, with improved blanket tension device which gives greater adjustment to blanket and assures the blankets giving a maximum of service. This machine plays an important part in good Sanforizing.*

Other progressive concerns to install Butterworth Sanforizers include Delta Finishing Co., Philadelphia, Pa., Lanett Bleachery & Dye Works, Lanett, Ala., North Carolina Finishing Co., Salisbury, N. C., Ramapo Finishing Corp., Sloatsburg, N. Y., and Ware Shoals Mfg. Co., Ware Shoals, S. C.

Butterworth Engineers will be glad to discuss Sanforizing in connection with your products and if you desire will show you why there is so great a preference for Butterworth Sanforizers. Bulletins on Butterworth Sanforizers will be sent promptly upon request.

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in Philadelphia, April 24-28  
Booths 283 and 332*

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# BUTTERWORTH *Finishing* MACHINERY

A COMPLETE LINE OF RAYON AND FINISHING MACHINERY FOR THE TEXTILE INDUSTRY

# Sulfur Dioxide in the Textile Industry \*

BY A. K. SCRIBNER

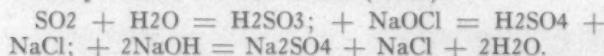
SULFUR dioxide—with the chemical formula  $\text{CO}_2$ —has been known for many years and is undoubtedly familiar to all of you. Liquid sulfur dioxide was first produced on a small commercial scale in this country about eighteen years ago. This product today is an important chemical in the textile industry, and its use is spread among a diversified number of industries. It is used in tanning, preservation of foods, treatment of city waters, production of sulfites and bisulfites, and as a refrigerant in many of the successful household refrigerators. This last use might be considered important to the textile industry because you have a large number of water coolers, etc., in your mills.

Briefly, our manufacturing process is as follows:

Sulfur from Texas is burned in a Glens Falls Rotary and the dilute sulfur dioxide gas produced is passed through a series of scrubbers, forming a one to two per cent  $\text{SO}_2$  solution. This solution is boiled in a so-called stripping tank operating at a vacuum and producing a wet  $\text{SO}_2$  gas of about 98 per cent strength. Four stages of compression with proper inter-cooling discharge wet  $\text{SO}_2$  gas at 120 pounds gauge to our drying system. Here by using only the physical properties of liquid sulfur dioxide we reduce the moisture from 10,000 p.p.m. to 100 p.p.m. for commercial work and 10 p.p.m. for refrigeration. This pressure and subsequent cooling liquefies the bases. The liquid, after analysis, is charged into the containers of trade, which hold 5, 10, 35, 150, 2,000 and 40,000 pounds. All containers are doubly weighed and those being prepared for refrigeration work are twice tested by chemists.

Let us turn now to some of the mill processes in which sulfur dioxide is actually being used today, first considering the bleach house.

$\text{SO}_2$ , when added to water, produces sulfurous acid, a solution having acidic properties plus the reducing values of  $\text{SO}_2$ . If soda ash or caustic are also present the pH of the resultant solution is much higher but the full reducing power of  $\text{SO}_2$  is not affected. When an oxidizing agent such as an alkaline sodium hypochlorite is added to an  $\text{SO}_2$ -bearing solution, the alkali is at once partially neutralized and the active chlorine completely changed to ordinary sodium chloride or salt ( $\text{NaCl}$ ).



The sulfurous acid is converted to sodium sulfate, sodium bisulfite, or sodium bisulfate, depending upon the alkali present in the hypochlorite.

Instead of mixing the two solutions, a piece of cloth can be dipped in a 1 degree Tw. or 2 degree Tw. chemic solution and immediately dipped in, let us say, a solution of about 0.025 per cent  $\text{SO}_2$  in water. On removing the cloth and looking for free Cl the test will be negative, and at the same time a check for alkali with Methyl Orange will show presence of hydroxyl ion. Now repeat, but rinse the cloth after the chemic, and on completing the experiment you will find Cl absent and a faint pink to Methyl Orange which is a pH of about 4.3.

This is really the antichlor cycle in the bleachery when using liquid sulfur dioxide and from it we obtained the well defined properties of an antichlor.

\*Paper presented at meeting, Piedmont Section, American Association of Textile Chemists and Colorists.

Primarily, the compound must remove all active chlorine and neutralize all free alkali quickly, economically, and safely, and it must be used in such concentrations that goods leaving the pit may be freed of the antichlor with almost no washing. These characteristics partially control the all-important problem of tendering or damage to fabrics while in process.

The secondary considerations involve the ability of the antichlor to penetrate to the chemicals in the seams and warp of heavy fabric; the maintenance of suitable concentrations by a simple continuous feed combined with freedom from trouble if variations in flow are large and, finally, the economies due to reductions in labor, wash water and wear and tear on the goods.

Perhaps one of the oldest white sours is sulfuric acid, and as I remember it, the box used to average 1 degree Tw. or 1 per cent sulfuric acid. This sour actually breaks up the hypochlorite, drives off chlorine and produces an intense bleaching action during a very short interval. It depends on a strong acid concentration to dispose of the chlorine and this large amount of acid on the fabric must be washed off or tendering will follow.

Sulfur dioxide as antichlor reduced the  $\text{NaOCl}$  at once and a maximum of 0.025 per cent  $\text{SO}_2$  is all that is required for the work. Fortunately, the maximum concentration of  $\text{SO}_2$  that you can use without a warning odor is close to 0.025 per cent. Thus these two characteristics allow complete hypochlorite removal, prevent high acidity on the fabrics and give simple control.

The actual ratios of  $\text{SO}_2$  to  $\text{H}_2\text{SO}_4$  figure from 1 to 8 to 1 to 30, depending on the plant and operating conditions.

In practice, the cylinders of  $\text{SO}_2$  are placed at the sour pits in an upright position. The liquid boils in the container, producing gaseous  $\text{SO}_2$  which in turn is passed through control bubble bottles to the sour pit. The initial concentration is usually 0.025 to 0.03 per cent, and after that the flow is maintained at a predetermined rate depending on chemic—rinse—speed—weight of fabric, etc. The experienced operator soon knows the rate of flow required, and without a test of any kind tells by the odor of  $\text{SO}_2$  in the antichlor pit and by a Cl check from time to time whether he is getting the results he wants. On a new setup it is well to make a complete study from the chemic to finishing room and determine just how strong the  $\text{SO}_2$  must be, how much prewashing is needed, etc. Starch iodide, Methyl Orange and iodine will be ample for the usual test work.

As each bleachery has its own problems and methods, the only way to determine whether one should use liquid sulfur dioxide is to try it. The equipment is merely a cylinder, hose and bubble bottle plus the co-operation of the bleacher.

We next find liquid sulfur dioxide in the dyehouses of mills that use hydrosulfites for dyeing and stripping cotton and wool. Here the use involves a process for the manufacture of hydrosulfite solutions, which contain either zinc or sodium hydrosulfite. The ultimate solutions made in the dyehouse if processed further in proper equipment, etc., would produce hydrosulfite powder. These later steps are difficult and those producing powders have done an excellent job in furnishing them at a reasonable cost.

The use of "hydro solutions" in the mill is simply an *economic one*, and by that I mean reduced costs in the dyehouse. The product of the reaction caused by adding liquid sulfur dioxide to zinc dust suspended in water is zinc hydrosulfite. In some stripping work zinc "hydro solutions" have been successfully used but usually an alkali is next added. This precipitates the zinc and leaves in solution  $\text{Na}_2\text{S}_2\text{O}_4$  (sodium hydrosulfite) with zinc hydroxide or carbonate in suspension.

For the reduction of Indigo, the springing of the large continuously operated Indigo vats, and the dyeing of vat colors in raw stock or Franklin process machines: The above solution is always filtered and stored in specially designed tanks. The filtrate is clear and alkaline, with the characteristic color of a sodium hydro sulfite solution varying in concentration from 1 to 1.5 pounds of  $\text{Na}_2\text{S}_2\text{O}_4$  per gallon. This solution, when properly prepared, has been kept in laboratory tests for seven days with a loss of less than 4 per cent in strength as determined by the Indigo titration and checked by the ferricyanide test. Practically "hydro" is easily kept overnight with losses of about 5 per cent to 12 per cent. This "hydro" is usually used for the first morning spring. It in no way interferes with the process and represents a very small percentage of the total daily "hydro solution" produced. The equipment consists of properly designed tanks, pumps and presses. It is not expensive, is easy to operate once the operator is trained, and the upkeep has proven to be low. There are plants operating the South that were started in 1921, and the record shows that one in particular has never reduced a pound of Indigo with anything but these "hydro solutions" produced in the dyehouse.

The development of vat dyes and the rapid increase in their consumption naturally increased the demand for hydrosulfites. As the demand grew large enough, it was found that hydrosulfite solutions properly prepared could be used without filtration for vat dyeing. At first the specially prepared unfiltered "hydro solutions" were used on the jigs, then in the booster box of a continuous machine and finally for the reduction of the vat feed itself.

The "hydro" used for this work is tested with disulfonated Indigo, or ferricyanide. In dyehouse practice the Indigo works very well, especially if the titration is carried to the orange yellow endpoint. Practical tests with "hydro solutions" indicate that it is possible to introduce them into the regular formulate of the dyehouse, with possibly a slight adjustment in volume to start the mix and if desired a saving in alkali.

The equipment for this process is not complicated and up to now the evidence is that the "hydro solutions" are satisfactory.

Everything I have told you about these applications of  $\text{SO}_2$  is, of course, theoretically true, but the textile chemist or the practical bleacher or dyer in his endeavor to do an economical job for his mill has made successful the daily practical application of these uses, and in closing I want to pay a tribute to these men behind the scenes of so many fabrics produced today.

HICKORY, N. C.—A number of mills in and around Hickory reported increased schedules following long periods of desultory operations.

The Shuford Mills here and at Granite Falls, including Hickory Spinning Company of Longview, increased operations from one and two days a week to four and five days a week.

Like increases in schedules were reported at the Brookford Mills, near here.

#### SUPERINTENDENTS AND OVERSEERS

We wish to obtain a complete list of the superintendents and overseers of every cotton mill in the South. Please fill in the enclosed blank and send it to us.

, 193

Name of Mill \_\_\_\_\_

Town \_\_\_\_\_

Spinning Spindles \_\_\_\_\_ Looms \_\_\_\_\_

Superintendent \_\_\_\_\_

Carder \_\_\_\_\_

Spinner \_\_\_\_\_

Weaver \_\_\_\_\_

Cloth Room \_\_\_\_\_

Dyer \_\_\_\_\_

Master Mechanic \_\_\_\_\_

Recent changes \_\_\_\_\_

## CHEMICALS

Distributing Products Made by

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### General Chemical Co.

New York SULPHURIC ACID

### Hercules Powder Co., Inc.

Wilmington, Del. PINE OIL

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New York FORMALDEHYDE

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Cincinnati TEXTILE SOAPS

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### Victor Chemical Works

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## PERSONAL NEWS

Fred Babbington has resigned as overseer of the cloth room at the Dilling Mill, Kings Mountain, N. C.

F. E. Lifford, of Belmont, N. C., has accepted the position of overseer of the cloth room at the Dilling Mills, Kings Mountain, N. C.

R. H. Bridgeman has resigned as overseer weaving at the Phenix Mills, Kings Mountain, N. C.

J. M. James, of Batesburg, S. C., has accepted the position of overseer of weaving at the Phenix Mills, Kings Mountain, N. C.

R. M. Bundy has been elected vice-president of the Adams-Millis Corporation, High Point, N. C., succeeding R. O. Lindsay, who recently retired but who continues as a director.

J. D. Jobe, in charge of the New York offices of Adams-Millis Corporation, High Point, N. C., has been elected second vice-president of the company.

R. W. Jordan has been elected president of the Virginia Textile Corporation, Emporia, Va., which was recently organized to take over the Morrell Mills.

R. J. Woods has been appointed superintendent of the Gray Manufacturing Company, plant of Textiles, Inc., Gastonia, N. C., succeeding Sherman B. Laws, who recently went to Brevard, N. C., as superintendent of Pisgah and Green River Mills. Prior to joining the Gray organization two years ago Mr. Woods was superintendent of the Wampum Cotton Mills, Lincolnton, N. C., where he started as a doffer boy more than 20 years ago.

John Beard, formerly with the Sharples Specialty Company, of Philadelphia, is now associated with the Haveg Corporation of Newark, Del. Mr. Beard graduated from Lehigh University in 1920 and since that time has been engaged in technical sales work.

The Haveg Corporation is an associate of the Continental-Diamond Fibre Company, also at Newark, Del. The Haveg Corporation has just completed a new plant for the manufacture of corrosion resistant chemical equipment.

W. W. Glenn, textile executive of Lincolnton, N. C., who is at the head of a corporation that operates the Melville and Saxony Mills near this city, has been named general manager of the D. E. Rhyne estate by the executors of the will.

Under the terms of the contract Mr. Glenn will operate the Lincoln Cotton Mill and Laboratory Mill, both located near Lincolnton, as well as the Cherryville Manufacturing Co., the Howell Manufacturing Co., and the Wildan Manufacturing Co., all of Cherryville; the Piedmont Wagon Works, Hickory; the Lincoln Lithia Inn, health resort near Lincolnton, as well as manage the various mining and farm properties owned by the late Mr. Rhyne.

As manager of the estate, Mr. Glenn has been given the power of attorney to act as he sees fit in regard to Mr. Rhyne's investments in banks and corporations.

It was stated by Mr. Glenn that the entire estate would be held intact indefinitely or until business conditions improve to the extent that the properties will bring

## OBITUARY

### JOHN T. PRICE

Winston-Salem, N. C.—John T. Price, 63, assistant secretary-treasurer of the P. H. Hanes Knitting Company, died at his home here on Sunday, March 12th. He had been in declining health for several months with heart disease, but critically ill for only the past week. Funeral services were held at the Volger Funeral Home Monday afternoon, and the body was carried to Leaksville, his former home, for burial. For many years he was employed as office manager of the Carolina Cotton and Woolen Mills Company at Leaksville, resigning in 1918 to come to this city with the P. H. Hanes Knitting Company. His widow and three daughters survive.

### CLAUDE RAMSEUR

Greenville, S. C.—Funeral services for Claude Ramseur, president of the River Waste Mills of this city, were held at his home. He died after an illness of one week. He is survived by a widow and two children. He was fifty-seven years of age and a native of Lincoln County, North Carolina.

### Eastern Carolina Division to Meet April 27th

The Eastern Carolina Division of the Southern Textile Association will meet at the Textile School of N. C. State College on Thursday, April 27th, it has been announced by M. R. Harden, secretary. The meeting will be held in connection with the Textile and Style Shows held annually at the Textile School.

The first session will be held at 10 a. m., with Chairman E. M. Holt presiding. After the invocation, address of welcome and response, a number of questions of spinning will be discussed, the discussion to be led by D. F. Lanier, of Oxford.

The discussion on spinning will include reports on the results obtained from the use of cork rolls as compared with calf and sheep skin rolls and a discussion of the results obtained from various types of long draft spinning.

#### CARDING

The discussion on carding will be led by M. R. Vick, of Roanoke Rapids, N. C. The questions will include:

1. Discussion of new developments in card room equipment, such as cork rolls, new types of drawing frames, one-process pickers, etc.

2. Which would give the best results from the standpoint of evenness, 6 ends up at the drawing with a draft of 6, or 5 ends up with a draft of 5, single process drawing in both cases?

The meeting will adjourn for lunch at 1 o'clock and resume at 2 o'clock to complete the discussion.

### National Cotton Week

National Cotton Week should be an important factor in contributing to general industrial revival, according to a statement of George A. Sloan, president of the Cotton-Textile Institute, outlining the support pledged to this year's observance of the event, May 15-20.

"Coincident with a more general revival of confidence," said Mr. Sloan, "alert merchants with an eye to action, hail National Cotton Week as a constructive influence of special significance this year. The increased consumption of cotton, resulting from the promotional

stimulus of the week, will be reflected directly in the increased purchasing power of 12,000,000 people who are dependent for their livelihood on the growth, manufacture, and distribution of cotton. Improvement in their ability to consume naturally will have far-reaching effects on other industries.

"This year there are several factors that make for an intensified selling drive on cottons. There are present signs of rising market values which always attract consumer interest and consideration to household cottons, such as towels, blankets, sheets, tablecloths, etc. Second, women's fashion authorities are of one opinion that the style prestige of cotton is now at a new peak. Thanks to the bestowal of further favor by American designers and Paris dressmakers, cottons loom larger in the public mind as the unique means for women of all income-levels to keep abreast of fashion without resort to any 'buying holidays.' Moreover, on the basis of last summer's observance an increasingly large number of men will be turning to cotton suits in the selection of their summer wardrobes.

"Assurances of support from outstanding figures in the department store, chain store, mail-order house and resident buying fields for the week's third annual observance, May 15-20, indicate a concentrated selling of cotton merchandise of nation-wide scope for that period. Resulting from special co-operation of wholesale dry goods houses in all parts of the country in working with independent stores in smaller communities, it is likely that the number of retail establishments actively participating in the event will exceed 25,000, which was the number of stores taking part last year.

### Textile Exhibition and Style Show

Dr. Thomas Nelson, Dean of the Textile School, North Carolina State College, announced that the Textile Exhibition and Style Show will be held Thursday, April 27th.

Young ladies representing the home economics departments of the following North Carolina colleges will participate: Meredith College, Raleigh; Peace Junior College, Raleigh; St. Mary's, Raleigh; East Carolina Teachers College, Greenville; Catawba College, Salisbury; Louisburg College, Louisburg; Elon College, Elon; Flora Macdonald College, Red Springs.

The seventy-eight young ladies who will participate in this Style Show will model garments which they have made as a part of their classwork, from fabrics designed and woven in the Textile School by students, from yarns spun and dyed by them.

### Final Ginning Report

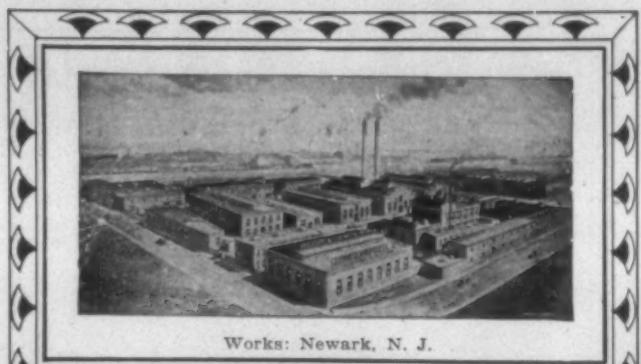
Washington, March 20.—Cotton production for 1932, as shown today by the Census Bureau's ginning report, was 12,702,281 running bales, counting round bales as half bales, or 12,994,430 equivalent 500-pound bales, compared with 16,628,874 and 17,095,594 for 1931 and 13,755,518 and 13,931,597 for 1930.

Round bales included and counted as half bales in the running bales total numbered 722,152, compared with 621,370 in 1931.

American-Egyptian bales included numbered 8,298, compared with 13,668.

Including in the 1932 figures are 30,500 bales which ginners estimated would be turned in after the March canvass.

The average gross weight of bales for the crop was 511.5 pounds, compared with 514.0 pounds for 1931.



Works: Newark, N. J.

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For perfect soaking results, use the best soaking oil.

The following products are all self-emulsifying and contain no mineral oil:

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### FOR RAYONS:

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Manufacturers

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PROVIDENCE

SOUTHERN OFFICE

CHARLOTTE, N. C.

### New Colors for Summer

Fourteen new colors for Summer have just been released to members of the Textile Color Card Association in advance swatch form, it was announced by Margaret Hayden Rorke, managing director. The 1933 Summer Card portraying these shades is now in preparation.

This special collection includes highlights of the Paris openings and confirms as well other recent color developments in fashion. It was explained by Mrs. Rorke that while these Summer shades were entirely different in tempo from the colors portrayed in the 1933 Spring Season Cards, they in no way lessened the style value of the latter.

Significant among the new shades are three hazy tints with a pearly glow, appropriately named Nacre Grey, Nacre Blue and Nacre Beige. These soft misty tones will be favored for dresses, blouses and accent notes, especially in combination with navy and black.

Yellows, increasingly important for sports and evening wear, are interpreted in two new shades. Sun Yellow is a radiant sunlight hue, while Liquer Yellow, as its name implies, reflects a cool greenish cast.

Two new blues further confirm the leadership of this color family in the Summer mode. Robin's Egg Blue, with a hint of green, is a smart new version of tourquoise. Bali Blue suggests the clear intense blue of tropical skies.

Of high fashion interest in the pink gamme is Parfait Pink, the deep luscious color of strawberry ice cream. Apricot Pink is a lighter fruit shade with a yellowish undertone. Camellia Red reflects the rich rosy red of the flower by that name.

Brilliant sharp colors, to be used alone or in combination with white, will also figure prominently in Summer fashions. These include Chili Red, an animated sports shade, and Blarney Green, a vibrant Irish hue.

### Banding Device for Clemson

CLEMSON COLLEGE, S. C.—The Cook-Taylor Company, Inc., of Charlotte, has just installed a correct control banding device to be used on the spinning frames in the Clemson Textile Department. This equipment enables the operator to tie on bands in such a way as to give practically the same tension on each band. The tension among bands tied on with this machine is said to vary about one pound whereas bands tied on by hand may vary from four to twenty pounds depending upon the skill of the operator.

This device prestretches the band under twenty-six pounds tension. When the band is released, tension is reduced to approximately six pounds. As soon as the band is felted into the whirl, tension is reduced to three to four pounds, which is sufficient for good work. The advantages claimed for this device are as follows: That the life of the band is increased approximately 50 per cent; that from ten to thirty per cent power may be saved; that the cost of resetting spindles is reduced in that the extra tension placed on the band while it is being tied on falls on the spindle rail rather than on the individual spindle; and that it reduces the amount of slack yarn and prolongs the life of the spindle bolster. It is stated that approximately 2,500,000 spindles in the United States are equipped with this device.

Mr. Willis, director, advises that the Clemson Textile Department will be glad to demonstrate this new device to anyone interested.

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oils are gauged*

● Years ago, Dr. J. Merritt Mathews, the noted authority on textile chemistry, wrote of the many features which distinguished Monopole Oil from all other sulphonated or Turkey Red oils. The numerous advantages which he found in its practical use still prevail.

In the past few years many improvements have been made in sulphonating processes and many new types of oils have been introduced. Despite these facts, Monopole Oil has retained its leading position in the textile industry because the application of these improved sulphonating methods to Monopole Oil has increased its superiority and augmented the original special features which have always distinguished this oil for all textile processing.

Today, Monopole Oil has unique qualities of stability, penetration, resistance and softening power. It meets all of the exacting requirements of the dyer and finisher for bleaching, boiling-off, dyeing, kier boiling, sizing and finishing or wetting-out.

Monopole Oil is readily soluble in hot or cold water. It produces well penetrated dyeings, bright colors and leaves the yarn or fabric in a soft and lustrous condition.

**FREE!**—Write today for your free sample of Monopole Oil for your own testing, also descriptive booklet.

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# TEXTILE BULLETIN

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### The Farm Relief Bill

We were fully in accord with the action of Congress in quickly approving the emergency banking and economy legislation sought by President Roosevelt, but we are absolutely opposed to the Farm Relief bill because it puts the Government into business upon a very large scale and it gives to Secretary of Agriculture Wallace, considered by many as the most inexperienced member of the Cabinet, arbitrary powers which should not be given to any cabinet member or even to a President, except in times of great emergency.

The authorship of the bill is attributed largely to Dr. Mordecai Ezekial, former economist for the Department of Agriculture and Farm Board, who spent a year studying farm problems in Germany, France, Russia and other countries of Europe, and Prof. Rexford G. Tugwell of Columbia, now Assistant Secretary of Agriculture. There is reason to believe that Dr. Ezekial has absorbed nationalization of agriculture from Russia and seeks to establish that unproved and doubtful system in this country.

Columbia University is the center and the breeding grounds of socialism and communism in this country and we look with suspicion upon anything proposed by anyone who is now or has recently been connected with that institution.

President Roosevelt, when submitting the Farm Relief bill to Congress, frankly expressed his uncertainty relative to the effectiveness of measure.

The New York Journal of Commerce refers to the measure as a "Blank Check" and unfortunately the "blank check" is not to be placed in the hands of President Roosevelt but those of Secretary of Agriculture Wallace, a man of very

limited business experience and whose ability is yet to be proved.

The objective of the bill is to lift commodity prices from their present levels to the pre-war levels which are considered to be the average selling prices from 1909 to 1914. The figures are represented by the following table which was prepared by the Bureau of Agricultural Economics:

	1909-14	Febr'y
	Average	Average
Cotton, per pound	12.4	5.5
Corn, per bushel	64.2	19.4
Wheat, per bushel	88.4	32.3
Beef cattle, pound	5.20	3.31
Hogs, per pound	7.24	2.94
Butter, per pound	25.5	18.4
Butterfat, pound	26.3	15.8
Lambs, per pound	5.90	4.19

We have no objection to the return of the pre-war prices; in fact, we would welcome their establishment, but the Farm Relief bill puts the Government into business upon a scale never before known and we believe that it would be better to continue the depression for a while longer rather than give any such powers to the Secretary of Agriculture.

If the domestic allotment feature can be eliminated from the portion relating to cotton and only the Smith bill allowed to apply to that commodity both the cotton farmers and the cotton mills will be fortunate.

Just before we go to press there is a report that the bill will be amended to prevent the domestic allotment feature from being applicable to cotton during 1933 and if that is true it will greatly help the situation.

The Farm Relief bill will probably be enacted before this issue of the Textile Bulletin reaches the mills, but unless it is materially amended we still consider its enactment very unwise.

### Value of Advertising

Henry C. Lytton, veteran Chicago merchant, remarks that 1933 is of all years a year in which business men should make full use of advertising.

Forty-six years ago, Mr. Lytton launched his business. He had, as he points out, just \$12,000 capital, but he did not hesitate to spend between \$3,500 and \$4,000 of it on advertising before he even opened his doors.

His business recently was valued at approximately \$7,000,000.

As a testimonial to the work that a wise advertising program can do for a business, his experience speaks volumes.

## State of Business

### The Dun & Bradstreet Trade Review says:

Sales during the early part of the week ran ahead of seasonal averages in such departments as children's wear, accessories, women's neckwear, hosiery, piece goods, and foodstuffs. China and glassware, men's clothing and furnishings, silverwear, and electrical goods also were unusually active. Fortified by payments on payroll checks and the freer withdrawals of savings accounts the public appears to be in a better buying mood than before the bank holiday was declared. Many retail stores now have started to go after business aggressively and are advertising extensively, the sales promotions under way emphasizing the attractiveness of merchandise at current prices.

### Roger Babson in his weekly statement says:

If Congress and the public continue to support our President, the recovery will be swifter than even the most optimistic could have dreamed. Instead of hoarding money, people will soon be spending money. Goods and services will become more desirable than dollars.

### New York Journal of Commerce says:

Retail trade has shown a pronounced tendency toward revival, which has been helped along by seasonal influences. The return of confidence in many quarters, especially if backed up by further improvement in trade volume, should accelerate the expected improvement in industrial activity over the next few weeks.

The Gastonia Gazette says, and we take it as an illustration of conditions in many of the smaller cities and towns:

Saturday was one of the biggest trade days merchants have had since before Christmas. Dry goods and department stores, grocery stores, and delicatessen shops, all report that they had an unusually big day Saturday.

## Einstein Prefers to Stay Out of Germany

Close upon the heels of Hitler's movement to crush the communists in Germany we notice the following:

New York, March 15.—Prof. Albert Einstein announced himself voluntarily exile for the present from Germany when he arrived here today from California.

How long he will remain out of Germany, Einstein's message said he does not know. But he "will not put foot on German soil as long as conditions in Germany are as at present."

Only a few months ago when the U. S. Government was investigating Albert Einstein before agreeing to admit him to this country, a great cry went up from college professors, with the denial that Einstein was a communist, but we notice that Einstein does not care to return to Germany during the present raid.

In our opinion Albert Einstein is a colossal faker.

Noted scientists say that his alleged relativity theory is so full of scientific errors that it is really not worthy of serious consideration.

Wherever and whenever his theory ran up against something that interfered with same, the

scientists say, he just jumped over that and kept on with his theory.

The truth is that Albert Einstein is much more of a communist than a scientist and we do not blame him for keeping away from Germany at this time.

## Wars vs. Automobiles

During all the wars in which this country has engaged as a nation—the Revolutionary, the War of 1812, the Mexican War, the Civil War, the Spanish-American, and the World War—Americans killed in action or who died of wounds—numbered under 300,000.

During the last 15 years—a period approximating the total duration of these six major wars—Americans killed in automobile accidents within the United States or who died of such injuries have numbered 325,000.

## Unethical Journalism

In their last issue the Charlotte Labor Herald says:

Under guise of destroying Communism he (David Clark) gave his whole-hearted support to an Anti-Syndicalism bill that was foisted on many of our N. C. legislators at Raleigh by Mr. Jeff Palmer, only to die in committee.

The above is a false statement made deliberately and wilfully. We have had no connection whatever with any effort to pass anti-syndicalism laws in North Carolina or any other State, and our readers know that we have twice so stated during the past two years.

Making a false statement of that kind without the slightest foundation for same is the height of unethical journalism.

## A Letter From Michigan

Jackson, Mich., March 18, 1933.  
Textile Bulletin,  
Charlotte, N. C.

Gentlemen:

Please accept my check for a continuation of my Bulletin subscription another year. Since receiving my first copy of your paper some fourteen years ago, I do not recall having missed reading a single copy and, so long as it remains up to past standards, wish to receive it weekly. Your Editor is my kind of man—thinks his own thoughts and has the nerve to express them. They, alone, are worth the subscription cost. So, more power to you.

Yours very truly,  
J. RALPH CLARK,  
Asst. Supt. Mich. State Textile Industries.

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## MILL NEWS ITEMS

WINSTON-SALEM, S. C.—The P. H. Hanes Knitting Company has declared the regular quarterly dividend of \$1.75 on the preferred stock, payable April 1, to stock of record March 30.

WINNSBORO, S. C.—The Winnsboro Mills have received a large order and beginning tomorrow will operate full time day and night to fill it. The order will require approximately four months to fill.

ROCK HILL, S. C.—With around 50 operatives at work, Jac. Feinberg Hosiery Mill, Inc., is now in operation. The plant manufactures women's full-fashioned silk hosiery. This plant was used formerly by the Rock Hill Hosiery Building Co.

NEW BERN, N. C.—In addition to operating at full time their two local sewing rooms, with more than 500 employees, the Cohen-Goldman Company, garment manufacturers, will immediately expand their activities and interests here by opening a third plant, it has been learned from Frank M. Girton, local manager.

CHATTANOOGA, TENN.—Davenport Hosiery Mills, Inc., has declared a dividend of 12½ cents on the common stock and the regular quarterly dividend of \$1.75 on the preferred stock, both payable April 1. In the three preceding quarters, dividends of 25 cents each were declared on the common stock.

MACON, GA.—The new department of the Southland Knitting Mill, which is being equipped for the manufacture of sweaters, when in full operation will mean that 200 employees will be on the pay roll. This company manufactures women's knit underwear and is on a full schedule with day and night shifts, and this schedule is expected to be in effect for at least five months.

EMPORIA, VA.—R. W. Jordan has been elected president of the Virginia Textile Corporation, which has been recently reorganized and was formerly known as the Morell Mill, Inc. The mill began work this week on an order for tapestry that is expected to keep it in operation until January, 1934. The present corporation is owned entirely by local people.

MARTINSVILLE, VA.—The three-story addition to the Pannill Knitting Company, whose plant is located on Cleveland avenue, has been completed and is now being occupied by the concern, machinery, equipment and stock being rapidly placed in the new structure to relieve present congested conditions.

The structure, built of brick, concrete and frame materials, is 120 feet long and 53 feet wide and makes available 20,000 more square feet of floor space to the present plant. The improvement cost upwards of \$12,000, it was learned. Finley & McCoy, local contracting firm, supervised the construction work, a large force of workmen being offered employment during the period of erection.

The Pannill concern is now operating on a full time schedule, offering employment to a large number of workers.

## MILL NEWS ITEMS

HIGH POINT, N. C.—A sharp increase in the rate of parcel post mailings from local hosiery plants indicative that stores scattered over the country are calling for immediate delivery to meet the heavy buying demand of recent days has been noted here during the past few days until last night a peak higher than has been reached in many months sent a vast amount of shipments north and south on trains out of here.

GREENSBORO, N. C.—Ben Cone, official of the Cone Export and Commission Company, at the weekly luncheon meeting of the Carolina Lodge, B'Nai B'Rith, speaking of the improved banking conditions throughout the nation and referring to the recent advance in textile prices, said: "This advance is not inflationary, but a natural trend toward what prices ought to be. At our mills we have a greater amount of business than I have ever seen before. These orders have come in largely because of the feeling that prices are sure to advance as general conditions improve."

HIGH POINT, N. C.—J. H. Adams was re-elected president of the Adams-Millis Corporation at the annual meeting. R. M. Bundy was elevated to the vice-presidency, succeeding R. O. Lindsay, who retired on January 1, but continues as a director. H. D. Jobe, in charge of the New York office of the corporation, was elected as second vice-president, and J. E. Millis was re-elected secretary and treasurer.

The stockholders at their meeting re-elected the board of directors, as follows: J. H. Adams, J. E. Millis, R. O. Lindsay, F. A. Yard, of New York, who was here to attend the meeting, and W. D. Carmichael, Jr., also of New York.

DURHAM, N. C.—Net earnings of the Durham Hosiery Mills Company amounted to \$64,518.49 during the past year, according to the report submitted to the stockholders and directors at the annual meeting. The report covers operations during the year 1932 and was received by stockholders and directors alike as an indication of the company's wise management and a bright outlook for 1933.

The following directors were elected by the stockholders: B. B. Adams, of Four Oaks; D. F. Burns, A. H. Carr, W. F. Carr, D. St. Pierre DuBose, George Watts Hill, John Sprunt Hill and W. W. Sledge, all of Durham.

The directors met immediately following the stockholders' meeting and re-elected the following officers: A. H. Carr, president; W. F. Carr, vice-president and secretary; D. St. Pierre DuBose, treasurer; E. M. Hunter, Jr., assistant treasurer; and W. J. O'Connor, Jr., assistant treasurer.

KINSTON, N. C.—Caswell Mills, Inc., principal office at Kinston, has filed a certificate of incorporation in the office of the Secretary of State at Raleigh, to manufacture yarns, cloths and all kinds of textile fabrics. The authorized capital stock consists of \$25,000 preferred, \$100,000 Class A common and 4,000 shares of common stock of no par value. Subscribed stock, 6 shares Class A common stock, by J. W. Ferrell, M. D. Goodrich, of Petersburg, Va., and John G. Dawson, of Kinston.

About the first of the month the sale of the Caswell

MODERN INDUSTRY DEMANDS COOPER HEWITT LIGHTING

# A re you substituting increased seconds for PROPER ILLUMINATION?

Once you have installed Cooper Hewitt mercury-vapor light for any manufacturing operation—its actual money value in terms of increased production, reduced seconds and other important items is simply and easily determined. Just try, for a time, to get along without it—or even with less than what has been found adequate!

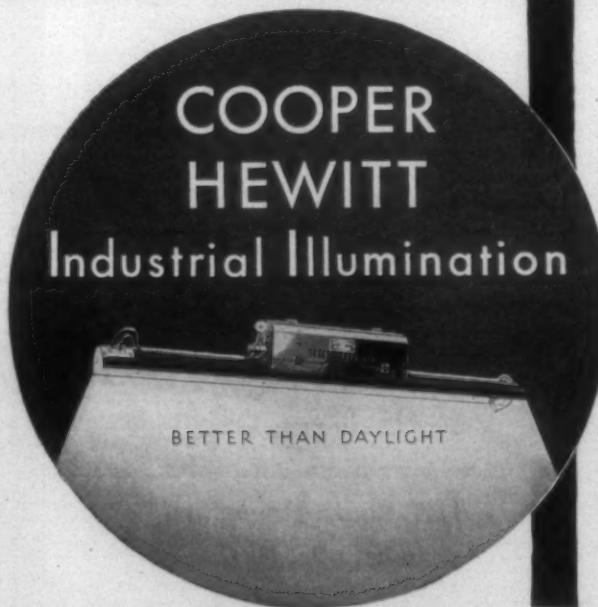
For example, we could mention a plant (name confidentially given on request) where 97 Cooper Hewitt lamps gave just the proper illumination necessary for weaving high-grade rayon crepe, etc. Ordinarily these lamps burn day and night though the plant is of monitor daylight construction. But in a recent effort to economize, the lights were turned out in one section of the plant whenever daylight seemed adequate . . . And, in this section, the percentage of seconds rose from their usual average of 4% to 7%!

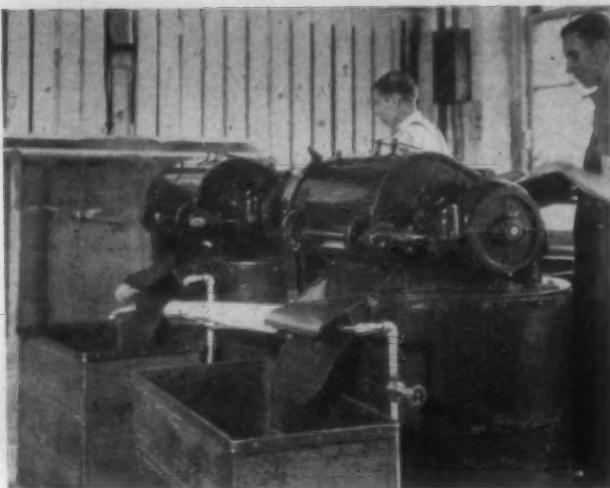
Again and again, in industrial plants all over the country, Cooper Hewitt mercury-vapor illumination has proved its actual dividend paying value. You cannot afford not to give Cooper Hewitt light at least a trial. General Electric Vapor Lamp Company, 855 Adams St., Hoboken, N. J.

**GENERAL  ELECTRIC  
VAPOR LAMP COMPANY**

549A Corp. 1933, General Electric Vapor Lamp Co.

Cooper Hewitt light eliminates dependence on window illumination and lets you utilize every square foot of your middle-floor areas at any hour of the twenty-four. It enables you to move your best equipment, if need be, and centralize it. It does away with the uncertainties of weather or season.





## how TERMACO saves

1. Effects a decided reduction in waste.
2. Eliminates additional re-working of waste.
3. Prevents bobbin injury caused by cutting.
4. Improves splintered bobbins considerably.
5. Eliminates singlings in yarn.
6. Gives spinners more time for their jobs.

*Write for "Termaco Facts."*

THE TERRELL MACHINE CO., Inc., Charlotte, N. C.  
 Mr. Luther Pilling, Danielson, Conn., Geo. Thomas & Co., Ltd., Manchester, England, Agents for Great Britain and Continental Europe  
 representatives for N. Y., N. J., Pa., New England States and Canada.

**CHEMICALS**  
 for the  
*Textile Trade*  
 Prompt Deliveries  
 from  
 Our Charlotte Warehouse  
 Charlotte  
 Chemical Laboratories,  
 Incorporated

Office—Laboratories—Plant—Warehouse

1122 South Boulevard

Charlotte, N. C.

## MILL NEWS ITEMS

Cotton mill to Petersburg, Va., interests, headed by J. W. Ferrell, was confirmed in Superior Court at Kinston, and papers ordering F. Clyde Dunn, receiver, to turn the property over to Mr. Ferrell were then signed immediately by Judge W. C. Harris, the purchase price being \$61,500. The plant and surrounding workers' village were valued at several hundred thousand dollars before the depression. Several hundred operatives were employed. At the time Mr. Ferrell and others purchased the industry he announced operations would be started as soon as possible.

HUNTSVILLE, ALA.—Federal Bankruptcy Court announces the appointment of V. C. Burrows, manager of the Scottsboro Hosiery Mills, against whom a petition in involuntary bankruptcy has been filed by three minor creditors, to act as receiver for the concern and operate it if necessary. Mr. Burrows' bond was set at \$5,000.

The mill represents an investment of nearly \$200,000 and gave employment to about 300 persons. Its liabilities are said to be approximately \$180,000. This industry manufactures silk and rayon and hosiery.

ASHEVILLE, N. C.—An addition to the Beacon Manufacturing Company plant at Swannanoa, to cost \$60,000 including equipment, was begun several weeks ago and will be completed about July 1, Charles D. Owen, Jr., assistant treasurer, said.

Mr. Owen, questioned about reports of new plans of his company for additions to the local plant, said he did not know how many additional employees would be required and could not determine how much more help would be needed until the machinery is put into operation. Home offices of the company are at New Bedford, Mass.

The plans call for construction of a new one-story sawtooth roof type addition to the mill at Swannanoa, totalling about 70,000 square feet of floor space.

Baker and Turoq, of Providence, R. I., are architects and engineers.

### The Colorist and Co-Operation

*(Continued from Page 6)*

material, the best average results having been obtained by the use of copperas ferric nitrate and sulphuric acid at a temperature of 170-180 deg. F. This is a corrosive liquid and, at the high temperature used, we have found it greatly to the advantage of a plant to install a completely rubber-lined box so that all iron work is well protected. Bearings should be rubber and gudgeons Allegheny metal, or the gudgeons may be completely covered with rubber. A standard box of this type is now available at a moderate cost. Lead-lined tanks, while satisfactory for a short time, show a tendency to warp and buckle and finally to break away at the corners. The goods, having been passed through the oxidizing solution and skinned for 10 to 15 seconds, are rinsed, passed through oxalic acid to clear the whites, rinsed and soaped. They are then ready for finishing.

As far as the fastness of these colors is concerned, it is only necessary to make the proper selection as you would with ordinary vat colors, the Indigosols being exactly as fast as the corresponding vat. Some of them are derived from the Indigoid series and some from the Indanthrenes.

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### Sees Confidence in Future

"We believe that today the country at large is facing the future with a far greater degree of confidence than at any time since the depression began. The President has established an "all time record" in the decisive handling of momentous certain to profoundly influence the trend of American economic affairs, and the benefits sure to accrue from this restoration of confidence cannot be overestimated. Of major importance is the enactment of President Roosevelt's Economy Bill, and of particular interest to the textile industry is the new Proposed Emergency Agricultural Relief Bill. We believe the original Smith Bill is the best proposal as to cotton and allied interests. It appears that the best to be had now is the inclusion of the main provisions of this bill in the

administration's Agricultural Relief Program. The removal, as a threat over the cotton market, of some three million bales of cotton should be particularly beneficial to our industry. The further reduction, both in seed loans and loans through the Regional Agricultural Bank, should bring about a reduction in acreage in addition to that provided in the Smith bill," Southeastern Cottons, Inc., reports.

"The volume of cotton cloth sold this week has been much less than in the previous one, but this was to be expected in view of the large volume placed. While prices in some instances were lower, there were others which showed slight advances after the opening of the cotton market Thursday. Good sales were made in colored goods as well as any other special fabrics and the market as a whole did very well."

### Cherry Blossom Time in Washington

#### Train Travel Bargain Fares VIA Southern Railway System

Saturday, April 1st and 8th

**\$6.00**

Round Trip Fare From Charlotte,  
N. C.

**\$6.00**

Proportionate fares from other North Carolina stations.

Tickets on sale going trip April 1st and 8th, return limit leave Washington, D. C., prior to midnight of April 3rd and 10th.

**"New Deal" Extension Feature**  
Tickets may be extended as long as five days at fee \$1.00 per day per ticket.

#### Reduced Round Trip Pullman Fares

The Japanese cherry trees are blooming along the historic Potomac. Don't miss it this spring.

Tickets good on all trains except Crescent Limited.

Consult Ticket Agents  
**R. H. GRAHAM**  
Division Passenger Agent  
Charlotte, N. C.

### Visit the Beautiful Magnolia Gardens and Middleton Gardens Charleston, S. C.

#### Train Travel Bargain Fares Via Southern Railway System

**\$3.00**

Round Trip Fare From Charlotte,  
N. C.

**\$3.00**

Tickets on sale March 24th, 25th, 31st and April 1st, final return limit Monday following date of sale.

**"New Deal" Extension Feature**  
Tickets may be extended as long as five days at fee \$1.00 per day per ticket.

Don't miss this opportunity to visit these World Famous Gardens, comprising many acres of gorgeously developed Azaleas unexcelled in variegated coloring and beauty.

#### Reduced Round Trip Pullman Fares

Consult Ticket Agents  
**R. H. GRAHAM**  
Division Passenger Agent  
Charlotte, N. C.

## SELLING AGENTS for SOUTHERN COTTON GOODS

### Deering, Milliken & Co.

Incorporated

79-83 Leonard Street

New York

99 Chauncey St., Boston

223 Jackson Blvd., Chicago

### CURRAN & BARRY

320 Broadway

New York, N. Y.

DOMESTIC

EXPORT

### MERCHANDISING

JOSHUA L. BAILY & Co.

10-12 THOMAS ST., NEW YORK

Do You Have a Vacancy That You Wish to  
Fill?

Get Your Man!

Through A

Classified Ad

In The

Southern Textile Bulletin

## COTTON GOODS

New York.—A more encouraging situation was noted in cotton goods last week. While the volume done was less than the large buying of the previous week, trading was expected to be less active due to the recent heavy covering. Gray goods prices appeared to be a compromise between the recent lows and the advances named during the preceding week. The market in general is showing an unfavorable reaction toward farm relief legislation.

Business last week covered fair sales of gray goods, and included sales of colored goods, particularly denims at higher prices. The general tone of the fine goods market was steadier.

While little large business developed to test out the market, but there was sufficient bidding during the day to establish that mills were very generally making no concessions on the standard wide print cloth constructions. On the 39-inch 4.75-yard 68x72s the first hand market held firm at 3 $\frac{1}{8}$ c, although second hands came out with some goods at 3 $\frac{3}{4}$ c. For 39-inch 4-yard 80 squares some centers were still accepting 4 $\frac{1}{4}$ c, while others held for 4 $\frac{7}{8}$ c.

Aside from scattered buying of moderate spot lots for fill-in purposes, fine goods markets were quiet, and prices held steady. The concentration of buying on relatively few constructions over the past several weeks has been a disturbing factor and has resulted in some disparities in the differentials as between constructions of similar fabrics.

Carded broadcloth quotations were somewhat erratic.

Narrow sheetings appeared to be holding strong, although there was little inquiry to test them. Sheetings traders generally felt that the advances in this division were on a firmer basis in that there had been little, if any, speculative buying, and also because prices prior to the holiday were at the lowest mill margins in a generation.

Prices at the week-end were:

Print cloths, 28-in., 64x60s	2 $\frac{5}{8}$
Print cloths, 27-in., 64x60s	2 $\frac{1}{2}$
Gray goods, 38 $\frac{1}{2}$ -in., 64x60s	3 $\frac{1}{2}$
Gray goods, 39-in., 80x80s	4 $\frac{7}{8}$
Gray goods, 39-in., 68x72s	3 $\frac{7}{8}$
Brown sheetings, 3-yard	5
Brown sheetings, standard	5 $\frac{1}{4}$
Brown sheetings, 4-yard, 56x60s	4 $\frac{5}{8}$
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J. P. STEVENS & CO., INC.

*Selling Agents*

40-46 LEONARD ST., NEW YORK

## YARN MARKET

Philadelphia, Pa.—Trading in cotton yarns was of a conservative nature after the reopening of the cotton exchanges. Most sellers reported very good inquiry, but buyers showed a good deal of hesitancy over the price situation. Quotations showed considerable irregularity, although many spinners were very firm in their price ideas. Buyers showed a decided disposition to watch cotton developments very closely and their purchases during the next few weeks are expected to be guided closely by the trend of the cotton market. The proposed farm relief program is again an important factor in the yarn market.

Sellers' quotations show considerable variations, as the equilibrium of the market has not been completely restored. An influential group of sellers is continuing to hold out for higher prices for immediate supplies of certain wanted spinnings in important counts, of which local supplies were more or less depleted during the market suspension.

Despite reports of stocks of single and ply combed peeler yarns being held by some of the spinners, the prices being paid seem to indicate that less yarn is being offered than is wanted in this department. Both carded and combed yarn spinners are backing away from contracts offered them at today's prices and which involve remote deliveries. Consumers' interest, on the contrary, appears to be going beyond the usual covering period of 30 to 60 days.

Spinners are intent on maintaining their present prices that have brought them hardly more than cost where cheaply owned cotton has been used. On a replacement basis buyers are told that yarns continue too cheap, unless cotton today goes off from the closing levels of Friday, when cotton trading was discontinued.

Fair amounts of mercerized yarns were moved to manufacturers last week and in the previous week, one large establishment reporting sales during that time were far greater than in any recent corresponding period. Logically, it was stated, this week's movement represented a tapering in volume.

Southern Single Warps		30s	18 - 19
10s	12 1/2 - 13	40s	24 1/2 -
12s	13 -	40s ex.	26 -
14s	13 1/2 -	50s	29 -
16s	14 -	60s	33 -
20s	15 -	Duck Yrns, 3, 4 and 5-Ply	
26s	16 - 16 1/2	8s	18 -
30s	18 -	10s	18 - 13 1/2
Southern Two-Ply Chain Warps		12s	13 1/2 - 14
8s	13 -	16s	14 1/2 - 15
10s	13 - 13 1/2	20s	15 - 15 1/2
12s	13 1/2 - 14	Carpet Yarns	
16s	14 1/2 - 15	Tinged carpets, 8s. 3	
20s	15 - 16	and 4-ply	11 1/2 -
24s	16 1/2 - 17	Colored stripes, 8s. 3	
30s	18 - 19	and 4-ply	14 1/2 -
36s	25 - 25 1/2	White carpets, 8s. 3	
40s ex.	26 - 26 1/2	and 4-ply	12 1/2 -
Southern Single Skeins		Part Waste Insulating Yarns	
8s	12 1/2 - 13	8s, 1-ply	11 1/2 - 12
10s	13 -	8s, 2, 3 and 4-ply	11 1/2 - 12
12s	13 - 13 1/2	10s, 2, 3 and 4-ply	12 - 12 1/2
14s	13 1/2 -	12s, 2-ply	12 1/2 - 13
16s	14 -	16s, 2-ply	13 1/2 - 14
20s	15 -	20s, 2-ply	14 - 14 1/2
26s	16 1/2 -	30s, 2-ply	16 1/2 -
30s	18 -	36s, 2-ply	18 - 18 1/2
36s	24 -	8s	12 1/2 - 13
Southern Two-Ply Skeins		10s	13 -
12s	13 1/2 - 14	12s	13 1/2 -
8s	- 13	14s	14 -
10s	13 - 13 1/2	16s	14 1/2 -
12s	13 1/2 - 14	18s	15 -
14s	14 - 14 1/2	20s	15 -
16s	14 1/2 - 15	22s	15 - 15 1/2
20s	15 1/2 - 16	24s	16 1/2 -
24s	16 1/2 - 17	26s	17 -
26s	17 - 17 1/2	28s	17 1/2 - 18
		30s	18 - 18 1/2

## WENTWORTH

### Double Duty Travelers

Last Longer, Make Stronger Yarn, Run Clear, Preserves the SPINNING RING. The greatest improvement entering the spinning room since the advent of the HIGH SPEED SPINDLE.

Manufactured only by the  
National Ring Traveler Co.  
Providence, R. I.

31 W. First Street, Charlotte, N. C.



Reg. U. S. P. O.

Seydel-Woolley  
Company  
ATLANTA

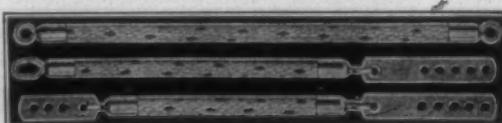
Textile  
Chemicals  
For  
Best Weaving  
  
A Concern is  
Known by the  
Customers It  
Keeps

## CLINTON STARCHES

FOR ALL TEXTILE PURPOSES

Manufactured by  
CLINTON CORN SYRUP REFINING  
COMPANY  
CLINTON, IOWA  
QUALITY SERVICE

## Loom Cords a Specialty



We Also Manufacture

The Improved Dobby Bars and Pegs

Rice Dobby Chain Company

Millbury Mass.

March 23, 1933

## SOUTHERN SOURCES OF SUPPLY

### for Equipment, Parts, Materials, Service

Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in the SOUTHERN TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information, service, equipment, parts or materials, and believe this guide will prove of real value to our subscribers.

**AKRON BELTING CO.**, Akron, O. Sou. Rep.: L. L. Haskins, Greenville, S. C.; L. F. Moore, Memphis, Tenn.

**AKTIVIN CORP.**, The 50 Union Square, New York City, Sou. Rep.: American Aniline Products, Inc., 1003 W. Trade St., Charlotte, N. C.

**AMERICAN CYANAMID & CHEMICAL CORP.**, 325 Fifth Ave., New York City, Sou. Office and Warehouse: 301 E. 7th St., Charlotte, N. C.; Paul Haddock, Sou. Mgr.

**AMERICAN ENKA CORP.**, 271 Church St., New York City, Sou. Rep.: R. J. Mebane, Asheville, N. C.

**ARNOLD HOFFMAN & CO., INC.**, Providence, R. I. Sou. Office: Independence Bldg., Charlotte, N. C.; R. E. Buck, Mgr. Sou. Reps.: Harold T. Buck, Winefoot Hotel, Atlanta, Ga.; Frank W. Johnson, P. O. Box 384, Greensboro, N. C.; R. A. Singleton, 2016 Cockrell Ave., Dallas, Tex.; R. E. Buck, Jr., 8 Tindel Ave., Greenville, S. C.

**ASHWORTH BROS., INC.**, Charlotte, N. C. Sou. Offices: 44-A Norwood Place, Greenville, S. C.; 215 Central Ave., S. W., Atlanta, Ga.; Texas Rep.: Tex-tille Supply Co., Dallas, Tex.

**BARBER-COLEMAN CO.**, Rockford, Ill. Sou. Office: 31 W. McBee Ave., Greenville, S. C.; J. H. Spencer, Mgr.

**BARKLEY MACHINE WORKS**, Gastonia, N. C. Chas. A. Barkley, president.

**BORNE-SCRYMER CO.**, 17 Battery Place, New York City, Sou. Reps.: H. L. Siever, P. O. Box 240, Charlotte, N. C.; W. B. Uhler, 608 Palmetto St., Spartanburg, S. C.; R. B. Smith, 104 Clayton St., Macon, Ga.

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**BUTTERWORTH & SONS CO.**, H. W., Philadelphia, Pa. Sou. Office: Johnston Bldg., Charlotte, N. C.; J. Hill Zahn, Mgr.

**CAMPBELL & CO., JOHN**, 75 Hudson St., New York City, Sou. Reps.: M. L. Kirby, P. O. Box 432 West Point, Ga.; Mike A. Stough, P. O. Box 701, Charlotte, N. C.; A. Max Browning, Hillsboro, N. C.

**CHARLOTTE CHEMICAL LABORATORIES, INC.**, Charlotte, N. C. A. Mangum Webb, Sec.-Treas.

**CIBA CO., INC.**, Greenwich and Morton St., New York City, Sou. Offices: 519 E. Washington St., Greensboro, N. C.; Greenville, S. C.

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**CORN PRODUCTS REFINING CO.**, 17 Battery Place, New York City, Sou. Office: Corn Products Sales Co., Greenville, S. C. Stocks carried at convenient points.

**CROMPTON & KNOWLES LOOM WORKS**, Worcester, Mass. Sou. Office: 301 S. Cedar St.; S. B. Alexander, Mgr.

**DABY RING TRAVELER CO.**, Taunton, Mass. Sou. Rep.: John E. Humphries, P. O. Box 843, Greenville, S. C.; Chas. L. Ashley, P. O. Box 720, Atlanta, Ga.

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**DRAPER CORPORATION**, Hopedale, Mass. Sou. Rep.: E. N. Darrell, Vice-Pres.; Sou. Office and Warehouses: 242 Forsyth St., S. W., Atlanta, Ga.; W. M. Mitchell, Spartanburg, S. C.; Clare H. Draper, Jr.

**DU FONT DE NEMOURS & CO.**, E. I., Wilmington, Del. Sou. Office: 302 W. First St., Charlotte, N. C.; John L. Dabbs, Mgr. Sou. Warehouses: 302 W. First St., Charlotte, N. C.; Wm. P. Crayton, Mgr. Sou. Reps.: D. C. Newman, L. E. Green, H. B. Constance, Charlotte Office; J. D. Sandridge, 1021 Jefferson St. Bldg., Greensboro, N. C.; B. R. Dabbs, 715 Provident Bldg., Chattanooga, Tenn.; W. R. Ivey, 111 Mills Ave., Greenville, S. C.; J. M. Howard, 125 S. Spring St., Concord, N. C.; W. F. Crayton, Ralston Hotel, Columbus, Ga.; J. A. Franklin, Augusta, Ga.; R. M. Covington, 718 Provident Bldg., Chattanooga, Tenn.

**EATON, PAUL B.**, 218 Johnston Bldg., Charlotte, N. C.

**ECLIPSE TEXTILE DEVICES**, Elmira, N. Y. Sou. Reps.: Eclipse Textile Devices Co., care Pelham Mills, Pelham, S. C.; Eclipse Textile Devices Co., care Bladenboro Cotton Co., Bladenboro, N. C.

**EMMONS LOOM HARNESS CO.**, Lawrence, Mass. Sou. Rep.: George F. Bahan, P. O. Box 581, Charlotte, N. C.

**FIRTH-SMITH CO.**, 161 Devonshire St., Boston, Mass. Southern Rep.: Wm. B. Walker, Jalons, N. C.

**GASTONIA BRUSH CO.**, Gastonia, N. C. C. E. Honeycutt, Mgr.

**GENERAL DYESTUFF CORP.**, 320 Fifth Ave., New York City, Sou. Office & Warehouse, 1101 S. Blvd., Charlotte, N. C.; R. A. Stigen, Mgr.

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**GENERAL ELECTRIC VAPOR LAMP CO.**, Hoboken, N. J. Sou. Reps.: Frank E. Keener, 187 Spring St. N. W., Atlanta, Ga.; Lewis W. Thomas, 187 Spring St. N. W., Atlanta, Ga.; C. N. Knapp, Commercial Bank Bldg., Charlotte, N. C.

**GOODYEAR TIRE & RUBBER CO., INC.**, THE, Akron, Ohio. Sou. Reps.: W. C. Killick, 206-207 E. 5th St., Charlotte, N. C.; C. P. B. Eccles, 141 N. Myrtle Ave., Jacksonville, Fla.; Roy Arthur, 713-715 Linden Ave., Memphis, Tenn.; T. F. Stinson, 500-6 Carrollton Ave., New Orleans, La.; E. M. Champion, 709-11 Spring St., Shreveport, La.; Paul Stevens, 1609-11 First Ave., North Birmingham, Ala.; B. S. Parker, Jr., Cor. W. Jackson and Oak Sts., Knoxville, Tenn.; E. W. Sanders, 203 E. Broadway, Louisville, Ky.; H. R. Zierach, 1225-31 W. Broad St., Richmond, Va.

**HART PRODUCTS CORP.**, 1440 Broadway, New York City, Sou. Reps.: Chas. C. Clark, Box 274, Spartanburg, S. C.; Samuel Lehrer, Box 265, Spartanburg, S. C.; W. G. Shull, Box 923, Greenville, S. C.; O. T. Daniel, Textile Supply Co., 39 N. Market St., Dallas, Tex.

**HERMAS MACHINE CO.**, Hawthorne, N. J. Sou. Rep.: Carolina Specialty Co., P. O. Box 530, Charlotte, N. C.

**HOUGHTON & CO., E. F.**, 240 W. Somerset St., Philadelphia, Pa. Sou. Sales Mgr.: H. J. Waldron, 514 First National Bank Bldg., Charlotte, N. C. Sou. Reps.: J. A. Brittain, 722 S. 27th Place, Birmingham, Ala.; Porter H. Brown, P. O. Box 656, Chattanooga, Tenn.; G. F. Davis, 418 N. Third St., St. Louis, Mo.; for New Orleans, La.; J. M. Keith, P. O. Box 663, Greensboro, N. C.; R. J. Maxwell, 522 Rhodes Hwy., Atlanta, Ga.; D. O. Wyllie, 514 First National Bank Bldg., Charlotte, N. C.

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**HYGROLIT, INCORPORATED**, Kearny, N. J. Southern Reps.: J. Alfred Lechler, 519 Johnston Bldg., Charlotte, N. C.; Belton C. Plowden, Griffin, Ga.

**JOHNSON, CHAS. B.**, Paterson, N. J. Sou. Rep.: Carolina Specialty Co., Charlotte, N. C.

**KEEVER STARCH CO.**, Columbus, Ohio. Sou. Office: 1200 Woodside Bldg., Greenville, S. C.; Daniel H. Wallace, Sou. Agent, Sou. Warehouses: Greenville, S. C.; Charlotte, N. C.; Burlington, N. C. Sou. Rep.: Claude B. Iler, P. O. Box 1383, Greenville, S. C.; Luke J. Castle, 2121 Dartmouth Place, Charlotte, N. C.; F. M. Wallace, 2027 Morris Ave., Birmingham, Ala.

**LOCWOOD-GREENE ENGINEERS, INC.**, 100 E. 42nd St., New York City, Sou. Office: Montgomery Bldg., Spartanburg, S. C.; R. E. Barnwell, V. P.

**LUBRIPOLY CORP.**, New York City, Sou. Rep.: Precision Gear & Machine Co., Charlotte, N. C.

**MARSTON CO.**, JOHN F. 247 Atlantic Ave., Boston, Mass. Sou. Rep.: Frank G. North, Inc., P. O. Box 844, Atlanta, Ga.

**MATTHATTAN RUBBER MFG. DIVISION OF RUBBESTOS-MANHATTAN, INC.**, Passaic, N. J. Sou. Offices and Reps.: The Manhattan Rubber Mfg. Div., 1108 N. Fifth Ave., Birmingham, Ala.; Alabama-Georgia Division, Atlanta Bldg., Birmingham, Crandall Eng. Co. (Special Agent); Birmingham, Long-Lewis Bldg., Co.; Gadsden, Gadsden Hdw. Co.; Huntsville, Nocino Hdw. & Supply Co.; Tuscaloosa Allen & Jamison Co., Montgomery, Teague Hardware Co., Florida-Jacksonville, The Cameron & Barkley Co., Miami, The Cameron & Barkley Co., Tampa, The Cameron & Barkley Co., Georgia-Atlanta, Atlanta Belting Co.; Augusta, Bearing Parts & Supply Co.; Columbus, A. H. Watson (Special Agent); Macon, Bibb Supply Co.; Savannah, D. DeTreville (Special Agent); Kentucky-Asheville, Ben Williamson & Co.; Harlan, Kentucky Mine Supply Co.; Louisville, Grafton-Peck Co., North Carolina-Charlotte, Matthews-Morse Sales Co.; Charlotte, Charlotte Supply Supply Co.; Fayetteville, Huske Hdw. House; Gastonia, N. C.

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**MAUNHEY STEEL CO.**, 237 Chestnut St., Philadelphia, Pa. Sou. Reps.: Aubrey Mauney, Burlington, N. C.; Don L. Hurlburt, 511 James Bldg., Chattanooga, Tenn.

**NATIONAL ANILINE & CHEMICAL CO., INC.**, 40 Rector St., New York City, Sou. Office & Warehouses: 201 W. First St., Charlotte, N. C.; W. H. Willard, Mgr. Sou. Reps.: J. I. White, W. L. Barker, C. E. Blakely, Charlotte Office: J. T. Chase, American Savs. Bk. Bldg., Atlanta, Ga.; H. A. Rodgers, 910 James Bldg., Chattanooga, Tenn.; J. E. Shuford, Jefferson St. Life Bldg., Greensboro, N. C.; E. L. Pemberton, 342 Dick St., Fayetteville, N. C.

**NATIONAL OIL PRODUCTS CO.**, Harrison, N. J. Southern Reps.: R. B. MacIntyre, Hotel Charlotte, Charlotte, N. C.; G. H. Small, 310 Sixth St., N. E., Atlanta, Ga.; Warehouse, Chattanooga, Tenn.

**NATIONAL RING TRAVELER CO.**, 267 W. Exchange St., Providence, R. I. Sou. Office and Warehouse: 131 W. First St., Charlotte, N. C. Sou. Warehouses: 131 W. First St., Charlotte, N. C. Sou. Agt., C. D. Taylor, Box 272, Atlanta, Ga.; Otto Pratt, Gaffney, S. C.; H. L. Lanier, Shawmut, Ala.

**NEW YORK & NEW JERSEY LUBRICANT CO.**, 292 Madison Ave., New York City, Sou. Office, 601 Kingston Ave., Charlotte, N. C.; Lewis W. Thomas, Sou. Dist. Mgr.; Sou. Warehouses: Charlotte, N. C., Spartanburg, S. C., New Orleans, La., Atlanta, Ga., Greenville, S. C.

**PERKINS & SON, INC.**, B. F., Holyoke, Mass. Sou. Rep.: Fred H. White, Independence Bldg., Charlotte, N. C.

**PHILADELPHIA BELTING CO.**, High Point, N. C. E. J. Payne, Mgr.

**PRECISION GEAR & MACHINE CO.**, Charlotte, N. C.

**ROBINSON & SON CO.**, WM. C., Dock and Caroline Sts., Baltimore, Md. Sou. Office, Charlotte, N. C.; D. H. Heath, Mgr. Reps.: Ben F. Houston, Charlotte, N. C.; Fred S. Smith, Charlotte, N. C.; G. H. Greene, 1101 W. Market St., Greensboro, N. C.; H. J. Gregory, Charlotte, N. C.

**SCCO-Lowell SHOPS**, 147 Milk St., Boston, Mass. Sou. Office and Repair Depot, Charlotte, N. C.; W. Walter W. Gault, Sou. Agent: Branch Sou. Offices: Atlanta, Ga.; John L. Graves, Mgr.; Spartanburg, S. C.; H. P. Worth, Mgr.

**SEYDEL WOOLEY CO.**, 746 Rice St., N. W. Atlanta, Ga.

**SIFF-P- EASTWOOD CORPORATION**, Paterson, N. J. Sou. Rep.: Carolina Specialty Co., Charlotte, N. C.

**SIRRING & CO.**, J. E., Greenville, S. C.

**SOLVAY SALES CORP.**, 61 Broadway, New York City, Sou. Reps.: Chas. H. Stone, 822 W. Morehead St., Charlotte, N. C.; Burkhardt-Schier Chemical Co., 1202 Chestnut St., Chattanooga, Tenn.; Woodward Wight Co., 451 Howard Ave., New Orleans, La.; J. A. Suddith & Co., Birmingham, Ala.; Miller-Lenfesty Supply Co., Tampa, Miami and Jacksonville, Fla.

**SONOCA PRODUCTS CO.**, Hartsville, S. C.

**SOUTHERN SPINDLE & FLYER CO.**, Charlotte, N. C.

**STANLEY WORKS, THE**, New Britain, Conn. Sou. Office and Warehouse: 552 Murphy Ave., S.W. Atlanta, Ga.; H. C. Jones, Mgr.; Sou. Reps.: Horace E. Black, P. O. Box 424, Charlotte, N. C.

**STEEL HEDDLE MFG. CO.**, 2100 W. Allegheny Ave., Philadelphia, Pa. Sou. Office and Plant: 621 E. McBee Ave., Greenville, S. C. H. E. Littlejohn, Mgr.; Sou. Reps.: W. O. Jones and C. W. Cain, Greenville Office.

**STEIN, HALL & CO., INC.**, 225 Madison Ave., New York City, Sou. Office, Johnston Bldg., Charlotte, N. C. Ira L. Griffin, Mgr.

**TERRELL MACHINE CO.**, Charlotte, N. C., E. A. Terrell, Pres. and Mgr.

**TEXTILE-FINISHING MACHINERY CO., THE**, Providence, R. I. Sou. Office, Johnston Bldg., Charlotte, N. C. H. G. Mayer, Mgr.

**U S BOBBIN & SHUTTLE CO.**, Manchester, N. H. Sou. Plants: Monticello, Ga. (Jordan Division); Greenville, S. C.; Johnson City, Tenn. Sou. Reps.: L. K. Jordan, Sales Mgr., First National Bank Bldg., Charlotte, N. C.

**UNIVERSAL WINDING CO.**, Providence, R. I. Sou. Offices, Charlotte, N. C., Atlanta, Ga.

**U. S. RING TRAVELER CO.**, 159 Aborn St., Providence, R. I. Sou. Reps.: William W. Vaughan, P. O. Box 792, Greenville, S. C.; Oliver B. Land, P. O. Box 158, Athens, Ga.

**VEEDER-ROOT CO., INC.**, Hartford, Conn. Sou. Office, Room 1401 Woodside Bldg., Greenville, S. C. Edwin Howard, Sou. Sales Mgr.

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WOLF, JACQUES & CO., Passaic, N. J. Sou. Rep.: C. H. Bruning, 305 W. Fischer Ave., Greenboro, N. C.; M. Costello, 2306 E. 4th St., Chattanooga, Tenn.

## New British Drapery Cloths Conventional in Designs

The latest British drapery fabrics show a definite tendency away from the large startling modernistic effects. Geometrical and geometrically-inclined floral designs still predominate, except on the all-cotton cretonnes, and patterns are distinctly more restful than in the past few years, the British Rayon Record finds.

Tootal Broadhurst Lee Co., Ltd., are offering a new line in heavy draperies, resembling coarse hand-woven tweeds, both plain and with a slight woven design. These cloths, though not cheap, are of everlasting wear. This firm has also produced a very good range of heavy printed linens, in single and double widths. Most of the designs are floral, of the period type, but the range also includes a few geometricals. The colors which, of course, are guaranteed, are rather pleasingly subdued, and the fabric is of sufficient weight for loose covers as well as hangings.

Brocades are still doing well. Glen Fabrics, Ltd., are offering some good examples in two-color geometrical designs. Printed brocades are a fairly new note and should do well. Several have a brocaded spot effect. One, by Tootal Broadhurst Lee Co., Ltd., has a printed design based on the overlapping shell motif. Another by the Calico Printers' Association, Ltd., has a blurred patchwork effect in pastel shades. In another Tootal Broadhurst Lee production the brocade gives the effect of wavy horizontal lines, the printed design being rather large and formally floral. In other cases the brocaded design is elaborate, and is repeated in the print.

A new note in the patchwork theme is found on a fairly heavy lustrous brocade by Tootal Broadhurst Lee Co., Ltd. There are only two colors employed, the patches being distinguished from each other by weave, satin, twill or plain, so that the cloth is reversible. Heavier brocades containing less artificial silk are as popular as ever, both for hangings and upholstery purposes. It is interesting to find the chevron motif creeping in here.—*New York Journal of Commerce*.

## Firestone Co. Sells New England Mill

Fall River, Mass.—The purchase of the Newburyport plant of the Firestone Cotton Mills was announced by Walter E. O'Hara, treasurer of the Textile Machinery & Supply Company of Fall River. It was stated that the purchase was made for cash. No announcement was made as to whether the plant may be operated, sold as a unit, or liquidated in small units. The purchasing concern has purchased and liquidated more than a dozen mills in New England during the past year.

The purchase included all land, buildings and machinery now owned by the Firestone Cotton Mills, located at Newburyport. This plant was installed new in 1924, and was equipped with the very latest types of machinery for the manufacture of tire fabrics.

Firestone has not operated the Newburyport plant during the past three or four years, inasmuch as they have been able to produce a sufficient amount of tire fabric for the Akron plants in the two other mills they operate in New Bedford and Fall River. The plant is equipped with 30,200 spindles. When in operation, it employed approximately 400 hands.

George C. Danielson, general manager of the Firestone mills, stated that the disposal of the Newburyport plant does not mean the curtailment in production by Firestone in this section. With some new equipment that has been recently installed at the New Bedford plant, Firestone can produce the same poundage as was formerly turned out when plants were operated in New Bedford, Newburyport and Fall River.

## North Carolina Exports Only Half of 1931 Value

Exports of merchandise from North Carolina during the first nine months of 1932 were valued at \$17,834,099, compared with \$35,271,915 in the corresponding period of 1931, according to information made public today by the Statistical Division of the Commerce Department.

North Carolina exports of leaf tobacco amounted to 60,939,874 pounds valued at \$9,507,965 in the first three quarters of 1932, compared with 71,335,206 pounds valued at \$22,524,255 during the first nine months of the previous year.

Cigarettes manufactured in the State and sent to foreign countries during the first nine months of 1932

were valued at \$1,889,694, compared with \$2,524,974 in the corresponding period of the previous year.

Exports of cotton cloth, duck and tire fabrics showed an increase in both quantity and value compared with the nine-month period of 1931, totaling 22,819,198 square yards valued at \$1,672,198 during the nine-month period last year, against 17,878,647 square yards valued at \$1,581,624 for the first three quarters of 1931.

Other North Carolina exports shipped to foreign countries during the first nine months were wheat flour, raw cotton, cotton and rayon hosiery, boards, planks and scantlings, non-metallic minerals, machinery, vehicles and parts, and chemicals and related products. Exporters in North Carolina are served by the Commerce Department's offices in Charlotte and in Norfolk, Virginia. In the past year, exporters in the area covered by these offices gave them credit for originating \$1,713,616 worth of foreign business.

## State Textile Grads Head Large Concerns

Raleigh, N. C.—A recent survey reveals that six graduates of the Textile School of N. C. State College hold positions as presidents of Southern textile concerns and of the 339 men who hold degrees from the Textile School, more than 70 per cent are now connected with some branch of the textile industry.

## World Cotton Standards Adopted

Washington.—Adoption of universal cotton standards by members of a conference held at the Department of Agriculture with representatives of the cotton trade from Europe and Japan was announced. The standards are to be used for the next two years.

Rewards in cotton grades, with respect to color, was requested by some European cotton associations attending, but in view of the delegates' difference as to need of changes, the Europeans withdrew their request and no revisions were agreed upon, it was stated. The department, however, announced it is to make a comprehensive study of the standards situation with a view to determining whether and to what extent revision may be desirable.

Users of the standards have promised to co-operate in this study, the results of which will be presented to interested group before action is taken, the department stated.

## Cotton Textiles

(Continued from Page 3)

the 50 hour maximum and 39 per cent, 55 hours. Eighteen per cent of the mills consulted had eliminated night activities entirely.

This voluntary reduction of working hours is regarded in the industry as a particularly effective indication of a growing constructive and co-operative attitude. At the end of November, 1932, the Department of Commerce reported 31,464,872 spindles in place, a decline of more than 16 per cent from the peak figure of 37,929,722 in the year 1925. If operated at capacity, however, one shift in the East and two shifts in the South, the potential over-supply of spindles under sales conditions for the last two years is approximately 14,000,000.

There are great many small mills in this country operated by proprietors who lack sufficient knowledge of production costs. Frequently, this lack of knowledge has not only been detrimental to the owners, themselves, but to the industry as a whole. To correct this, and as a basis for sound merchandising, The Cotton-Textile Institute is advocating the introduction of adequate cost methods. Largely as a result of its efforts, these systems have been adopted, at least on some basis, by 60 per cent of the mills above mentioned. The effect of this should be to curtail overproduction and to check the all too prevalent acceptance of orders yielding little or no profit or an actual loss.

Year	Production	Sales (Thousands of Yards)	Month-Tnd Average Stocks	
			Shipments (Thousands of Yards)	on Hand
1928	3,563,342	3,590,235	3,508,100	414,015
1929	3,527,382	3,420,269	3,458,112	381,272
1930	2,819,723	2,774,712	2,916,774	421,919
1931	2,784,432	2,891,229	2,858,146	283,805
1932	2,753,623	2,887,190	2,829,314	242,326

An experiment of considerable interest has been undertaken by a group of mills in one of the southern states. Not wishing to lose their identity and corporate existence by merging, these mills have entered into a partnership agreement on a yearly basis. The partners, who may withdraw from the agreement at will, share in the combined profits and if any mill should report a loss, a proportion is borne by the other partner mills. By pooling their production and co-operating in their sales efforts, these partners believe they will be able to manufacture and sell to better advantage, even should one or more of the mills be closed in whole or in part, and the production transferred to another unit of the partnership.

### PRODUCTION ADJUSTMENT

Determined educational efforts by the industry, especially through the instrumentality of such organizations as the Cotton-Textile Institute, representing the cotton mills of America, and the Association of Cotton Textile Merchants, representing their selling agents, have served to adjust production more nearly to demand. During the last two years, sales and shipments of carded cotton cloth have actually exceeded production, existing stocks having been reduced. This cloth represents from 40 to 50 per cent of the total cotton textile output and affords an excellent index of what is happening to cotton in wearing apparel and household uses as distinguished from heavy industrial consumption.

Two factors have contributed to the decline of 30 per cent in the per capita consumption of all cotton goods in 1932 as compared with 1927. The buying power of the average citizen obviously has been curtailed while the demand for heavy industrial fabrics has simultaneously declined. During these same years, the number of spin-

dles in place declined only 15 per cent. Over-production, therefore, was avoided primarily by continuing voluntary adjustment of operations to market conditions.

Despite adverse conditions in the last few years, comparatively steady operations have enabled cotton mills to employ a large number of wage earners. According to the latest figures compiled by the Bureau of the Census, the value of the products, in 1931, was reduced by almost half, as compared with 1929, while wages declined only 32 per cent and the number of wage earners only 22.5 per cent:

	Number Establishments	Wage Earners (Thousands)	Wages Paid (Millions of dollars)	Total Value of Products (Millions of dollars)
1925	1,366	445	\$354	\$1,714
1927	1,347	468	381	1,567
1929	1,281	425	324	1,524
1931	1,136	329	219	804

### SELLING POLICIES

Cotton goods manufacturers use one of three methods for effecting the distribution of their goods in the domestic: (1) through brokers, who sell in the open market on a brokerage basis; (2) through mills' own sales organizations; (3) through commission houses.

Brokers, as a rule, sell finished goods or grey goods, to which reference has already been made. Their largest customers, the converters, are located principally in the vicinity of New York. Well versed in styles and designs, the converters have grey goods finished for their own account by companies specializing in this operation. Grey goods are also sold for such industrial purposes as the manufacture of bags, containers, clothing and book cloths.

Spinning mill yarns, also sold direct and through yarn merchants, are consumed by a few weaving mills as well as knitting mills which manufacture underwear, sweaters and hosiery. Such yarn is also used for twine, wire insulation and other industrial purposes.

Many of the larger mills, although relatively few in number, dispose of their products through their own sales organizations and most of these mills manufacture, in part, trade-marked products, which are advertised extensively and have been in use for years.

Commission houses are located largely in the Worth Street district of New York City. Their merchandise may be divided into: over-the-counter goods, in finished form for resale to the consumer; supplies for cutters and garment manufacturers; materials for industrial use; and grey goods. There exists, today, an increasing tendency among the commission houses to "sell" their goods, not only in the established lines but by creating new demands and uses.

### PROMOTION AND NEW USES

Research and promotional efforts by cotton manufacturers and other branches of the industry through the Cotton-Textile Institute have played an important part during the depression in holding the domestic consumption to a relatively high level as compared with other commodities. In 1932 America consumed 5,013,000 bales of cotton; in 1931, 5,457,000 bales; in 1930, 5,382,000 bales.

During the past year, 204 style shows and loan exhibits of cottons were provided by the Institute. National Cotton Week was observed in 1931 and 1932 with such good results that it will be repeated annually. French as well as American designers and stylists have been employed to popularize cotton for fashionable women's wear.

While commonly associated with wearing apparel and

household articles, more than 1,000 different major uses of cotton have been listed. A considerable part of the industry's co-operative efforts are being directed toward finding additional outlets in industry and agriculture. Cotton bags for packaging potatoes, onions, fruits and nuts as well as cotton baling for piece goods and yarn have come into more general use.

The value of cotton fabric as a road membrane for bituminous-surfaced earth-type roads is being practically demonstrated. Cotton hats for men were marketed last year, and, further, comprehensive studies are being made with a view to extending the use of cotton as a protective coating in combination with bitumen as a covering for underground pipe, for belting and for roof repairs. The Cotton-Textile Institute has exhibited in various parts of the country two miniature "cotton houses," which were designed to illustrate the use of cotton for partitions, interior and exterior wall and roof surface.

Research workers continue to seek better methods for bleaching and finishing fabrics. Experiments covering methods of shrinking are being made, and fast dyes have been perfected to overcome fading due to washing and to sunlight. One trade group is concentrating on experimental work covering mercerizing methods with a view to obtaining a cotton fabric having an even silkier appearance than is obtained by present methods. The National Laundry Owners Association maintains an experimental laundry in which the causes of deterioration of fabrics, due to washing, are studied.

#### EXPORT SELLING POLICIES

The industry's distribution problems in respect to export trade are in sharp contrast to domestic transactions. Comparatively few houses handle most of the export shipments. In 1931, the last year for which statistics are available, cotton manufactures shipped abroad amounted to 4 per cent of the dollar value of all exports. Although the dollar value has declined appreciably because of low prices, the yardage volume has been maintained at a relatively high figure, being, according to the Department of Commerce, within 30.1 per cent, in 1931, of the average for the years 1921 to 1925. Certain adverse conditions are operating to retard sales. Some normally responsive markets, such as some of the South American countries, are closed because of the inability of merchants to obtain dollar exchange; the markets in other countries are restricted by reason of a limited amount of dollar exchange and the rationing of that available for stipulated purposes. Competition with exporters from other countries has been increased through depreciated exchange, although the generally superior quality of American textiles has tended thus far to mitigate this influence. Further, high duties, payable in cash, reduce the volume of the merchants' normal orders. Lastly, there exists a group of countries which have enacted high protective tariffs with a view to develop their own cotton textile industry or to create employment, even though imported goods could be obtained at relatively lower prices.

The American exporter must, accordingly, find his principal outlets in countries where the obstacles cited do not obtain. The comparatively large shipments maintained during recent years may be attributed in great part to intensive concentration on available markets by progressive exporting houses. Moreover, exporters have paid particular attention to styling and to the habits and customs of the inhabitants of importing countries. High-priced patterns, for instance, some of which had formerly been used only in silk goods, have been transferred to

the less expensive cotton product with good results in the export trade.

Agencies for American concerns have often been awarded to the first applicant, in times past, but exporters have learned that sales volume has been increased by engaging capable representation or employing their own salesmen. In addition, by carrying an extensive and dependable assortment of fabrics, the salesman is often able to assist the purchaser by combining orders in a single shipment, thereby reducing shipping and clearance charges and encouraging sales that would not be made on the basis of a limited selection.

Many of the commission houses have concentrated on the domestic market and have gained little knowledge of foreign conditions. Often, as a result of this, goods having a market abroad are sold at low prices for domestic use; thus the movement of local stocks is retarded and home market prices depressed.

The obvious advantages of unified action led to the organization, in 1930, of the Textile Export Association of the United States under the Webb-Pomerene Act. An agreement has already been reached on standardized terms and charges in foreign markets. This is of mutual interest to sellers and buyers as it displaces some former discriminatory terms. A committee is negotiating with steamship companies for more favorable rates to Latin-American and Far Eastern ports. Further progress, such as the stabilization of export prices, has not been made, principally because of the lack of integration in the industry itself.

#### CONCLUSIONS

While the Sherman Act prohibits combinations that would dominate the domestic market, the Webb-Pomerene Act, with considerably more lenient provisions, permits associations for the promotion of foreign trade. Since the average cotton mill has only about 25,000 spindles, it is obviously impossible for each of the 1,000 or more units to support an efficient export department. Co-operation by joining a central export sales group is considered by a number of prominent textile executives as essential to the development of an adequate foreign business.

The successful operation of such a group is a distinct possibility. There are several very efficient export houses now in existence, around which the larger organization could be built. Practically all export sales methods follow certain recognized channels and it would only be necessary for the exporters to reach a common understanding as to organization and as to procedure. An effective sales agreement among the cotton textile exporters has not yet been reached because the industry is still probably the most individualistic of all American manufacturing groups. It is recognized, however, that a greater volume of fabrics and yarns can be sold effectively in many foreign countries, with a corresponding reduction in the pressure on the domestic market. The constructive co-operative endeavors already undertaken to eliminate unsound trade practices and to stabilize conditions would unquestionably be strengthened through the functioning of an aggressive and capably managed export sales association. Such an organization, staffed with specialists familiar with the languages and trade customs of other nations and supported by a strong group of mill executives, should become a dynamic force in world markets. The plan would require capital, energy, initiative and experience, all of which are to be found in one of the country's major manufacturing industries—cotton textiles.

March 23, 1933

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**RODNEY HUNT MACHINE COMPANY**  
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## Nashua Mfg. Co. Suit Charges Infringement Of 'Indian Head' Mark

Cleveland—The Nashua Manufacturing Company has filed suit in the U. S. District Court here against the Bailey Department Stores Co. for \$50,000 damages for alleged infringement of the firm's "Indian Head" trademark. The petition also asks that the defendant be enjoined from further alleged infringement and from the unfair competition and defrauding of the public therein involved.

The complaint specifically alleges that the department store advertised and sold dresses not made of Indian Head fabric, but of an inferior fabric, as dresses made of Indian Head, and represented them as such to inquiries for Indian Head dresses. The petition states that the license arrangement with cutters assures the high quality of workmanship as well as the fabric. "Irreparable and pecuniary loss" to the extent of \$50,000 was sustained, says the complaint.

The alleged infringement of the

trademark "Indian Head," used together with a reproduction of an Indian's head, was held to be in violation of the following registrations with the U. S. Patent Office, Nos. 27,176, 62,355, 62,554, 105,539 and 207,282. The plaintiff valued this trademark at "over \$1,000,000" and said the good will of the business with which it is used is "largely in excess of that." The trademark has been in use for 98 years by the Nashua Manufacturing Co., and its predecessors, the Jackson Co., and has been used in commerce all over the world.

## British Textiles Imports and Exports

London, Eng.—Details by classifications of textile exports and imports by Great Britain during February, as reported by the monthly figures of the British Board of Trade, highlights of which appeared in Monday's issue of Daily News Record, are listed as follows:

**Imports**—Raw cotton and cotton waste, £2,531,817; wool, raw and waste and woolen rags, £3,408,462; silk, raw knobs and noils, £120,988; other textile materials, £633,489; cotton yarn and manufactures, £144,179; woolens and worsted yarn and manufactures, £169,923; silk and silk manufactures, £239,061; manufactures of other textile materials, £594,995; apparel, £584,819.

**Exports**—Raw cotton and cotton waste, £39,479; wool raw and waste and woolen rags, £335,719; silk, raw knobs and noils, £1,493; other textile materials, £40,622; cotton yarn and manufactures, £5,267,023; woolen and worsted yarn and manufactures, £2,228,036; silk and silk manufactures, £73,181; manufactures of other textile materials, £1,015,612; apparel, £842,642.

Cotton piece goods exports for January were distributed in part, as follows:

United States, 1,083,380 square yards valued at £47,326; Germany 2,434,100 square yards, valued at £47326; Germany 2,434,100 square yards, valued at £50,863; Switzerland, 5,258,900 square yards, valued at £65,431; Dutch East Indies, 1,448,200 square yards, valued at £33,494; China, 5,759,100 square yards, valued at £132,228; Argentine, 10,239,300 square yards, valued at £215,470; British India, 54,434,900 square yards, valued at £730,390; Australia, 12,043,700 square yards, valued at £306,819; Canada, 2,896,200 square yards, valued at £56,784.

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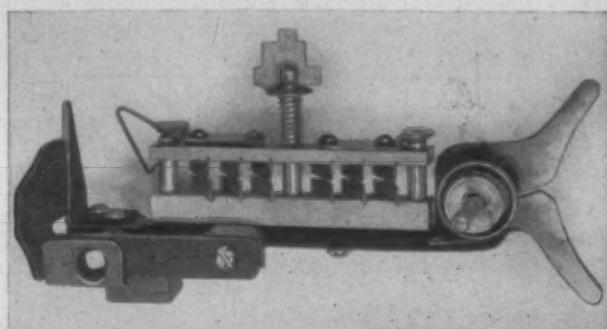
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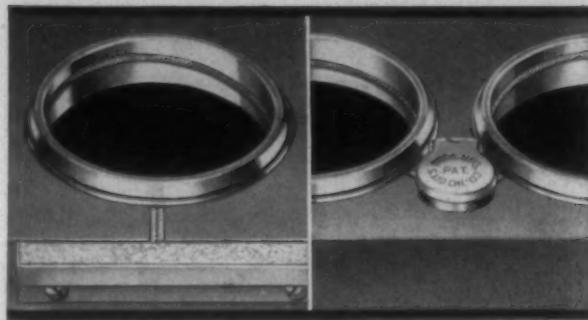
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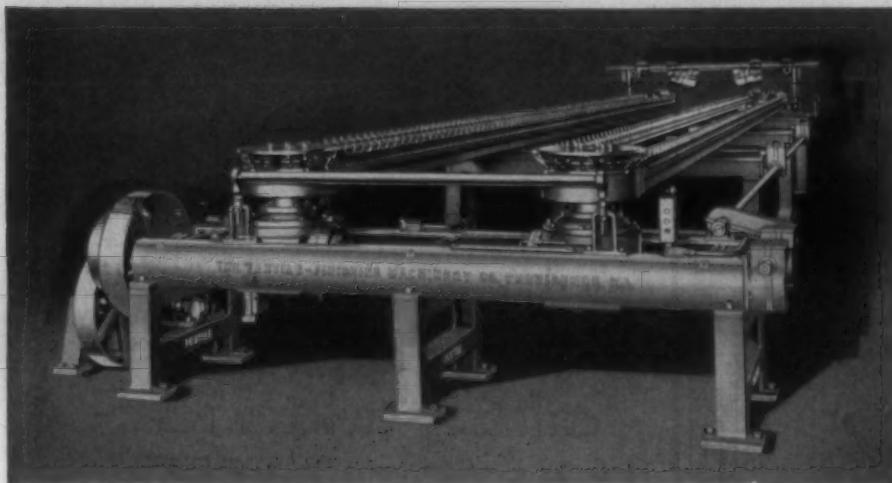


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